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LAWRENCE BERKELEY NATIONAL LAB BUILDING 49 DRAFT ENVIRONMENTAL IMPACT REPORT

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CHAPTER I

INTRODUCTION

This environmental impact report (EIR) has been prepared pursuant to the applicable provisions of the California Environmental Quality Act (CEQA) and its implementing guidelines (CEQA Guidelines), and the Amended University of California Procedures for Implementation of the California Environmental Quality Act (UC CEQA Procedures). The University of California (UC or the University) is the lead agency for this EIR, which examines the overall effects of construction and operation of the proposed Building 49 office building (proposed project). The proposed project would be located on an approximately 1.08-acre site on the hillside east of Cyclotron Road at Lawrence Berkeley National Laboratory (LBNL; also referred to as “Berkeley Lab,” “the Laboratory,” or “the Lab” in this document), and within the City of Berkeley.

CEQA requires that, before a decision can be made by a state or local government agency to approve a project with potentially significant environmental effects, an EIR must be prepared that fully describes the environmental effects of the project. The EIR is a public informational document for use by governmental agencies and the public. It is intended to identify and evaluate potential environmental consequences of the proposed project, to identify mitigation measures that would lessen or avoid significant adverse impacts, and to examine feasible alternatives to the project. The information contained in the EIR is reviewed and considered by the lead agency prior to its action to approve, disapprove, or modify the proposed project.

CEQA states that the lead agency (in this case, the University) shall neither approve nor implement a project as proposed unless the significant environmental effects of that project have been reduced to a less-than-significant level, essentially “eliminating, avoiding, or substantially lessening” its expected impacts. If the lead agency approves the project despite residual significant adverse impacts that cannot be mitigated to less-than-significant levels, the agency must state the reasons for its action in writing. This “Statement of Overriding Considerations” must be included in the record of project approval.

This EIR has been prepared to inform The Regents of the University of California (“The Regents”), responsible agencies, trustee agencies, and the public of the proposed project’s environmental effects. The EIR is intended to publicly disclose those impacts that may be significant and adverse, describe the possible measures that would mitigate or avoid such impacts, and describe a reasonable range of alternatives to the project. The illustrative figures of the proposed project contained herein, although necessarily conceptual in nature, describe the major features of the project (e.g., general scale, massing, occupancy, use, etc.).

A. PROJECT BACKGROUND

The proposed Building 49 project is intended to help address a shortage of office space at LBNL that results in overcrowded work conditions for many staff. It would advance LBNL towards its target goal, as recommended by the U.S. General Service Administration, of 135 net square feet of primary office space per person. LBNL's current space allocation is approximately 100 net square feet per office worker. The Building 49 project would be a third-party development, constructed by an independent developer for, and occupied by, the Lab, thereby eliminating the need for scarce government funding otherwise needed to construct such a building on-site. Building 49 would provide an overflow office building in close proximity to the front entrance of LBNL and near the Building 50 complex, and would create a signature building that would serve as a focal point for LBNL visitors entering the main gate at Blackberry Canyon. As opposed to using additional leased space off-site, Building 49 would minimize inefficiencies of staff being segmented from the main LBNL campus; it would reduce costs and inefficiencies associated with frequent travel between off-site leased space and the main site in the everyday conduct of LBNL business; and help achieve the LBNL objective of consolidating Laboratory staff and functions on site wherever practical.

B. TIERED PROJECT EIR

This EIR on the proposed project is a tiered project EIR. The EIR is tiered from three programmatic, campus-wide CEQA documents:

- The *Site Development Plan* EIR, August 1987 (State Clearinghouse No. [19]85112610);
- The *Proposed Renewal of the Contract between the United States Department of Energy and The Regents of the University of California for Operation and Management of the Lawrence Berkeley National Laboratory*, Supplemental EIR, September 1992 (State Clearinghouse No. [19]91093068); and
- The *Proposed Renewal of the Contract between the United States Department of Energy and The Regents of the University of California for Operation and Management of the Lawrence Berkeley National Laboratory*, Supplemental EIR Addendum, September 1997 (State Clearinghouse No. [19]91093068).

These documents are referred to herein as the “LRDP¹ EIR, as amended.”

The proposed project EIR is tiered from the 1987 LRDP EIR, as amended, in accordance with Sections 15152 and 15168 of the CEQA Guidelines and Public Resource Code Section 21094. The 1987 LRDP EIR, as amended, is a Program EIR, prepared pursuant to Section 15168 of the CEQA Guidelines (Title 14, California Code of Regulations, Sections 15000 et seq.). The 1987 LRDP EIR, as amended, analyzes full implementation of uses and physical development proposed under the 1987 LRDP through the year “20XX,” which is an indeterminate horizon year

¹ LRDP = Long Range Development Plan, the University of California's term for a campus-wide planning document. Each U.C. campus is required to periodically reexamine its academic goals and devise physical plans to support them. The LRDP is the planning tool to guide the physical development of the campus – in this case, the LBNL site.

flexibly projected to occur within the current century. Measures are identified in the 1987 LRDP EIR, as amended and adopted by The UC Regents, to mitigate the significant adverse project and cumulative impacts associated with that growth.

The CEQA concept of “tiering” refers to the coverage of general environmental matters in broad program-level EIRs, with subsequent focused environmental documents for individual projects that implement the program. This environmental document incorporates by reference the analyses in the 1987 LRDP EIR, as amended, and concentrates on project-specific issues. CEQA and the CEQA Guidelines encourage the use of tiered environmental documents to reduce delays and excessive paperwork in the environmental review process. This is accomplished in tiered documents by eliminating repetitive analyses of issues that are adequately addressed in the Program EIR and by incorporating those analyses by reference.

Section 15168(d) of the CEQA Guidelines provides for simplifying the task of preparing environmental documents on later parts of the program by incorporating by reference factors that apply to the program as a whole. Consistent with CEQA Guidelines Section 15152(d), where an EIR has been prepared or certified for a program or plan, the environmental review for a later activity consistent with the program or plan should be limited to effects that were not analyzed as significant in the prior EIR or that are susceptible to substantial reduction or avoidance.

Accordingly, the tiering of the environmental analysis for the proposed project allows this Tiered EIR to rely on the 1987 LRDP EIR, as amended, for the following:

- a discussion of general background and setting information for environmental topic areas;
- overall growth-related issues;
- issues that were evaluated in sufficient detail in the 1987 LRDP EIR, as amended, for which there is no significant new information or change in circumstances that would require further analysis;
- long-term cumulative impacts assessment; and
- mitigation measures from the 1987 LRDP EIR, as amended, which are applicable to the proposed Building 49 project are included in the Building 49 project description.

The purpose of this Tiered EIR is to evaluate the potential environmental impacts of the proposed project with respect to the 1987 LRDP EIR, as amended.

A list of the 1987 LRDP EIR, as amended, mitigation measures that are incorporated into the project description, as well as the project-specific mitigation measures, is provided at the end of each topic section under Summary of Impacts and Mitigation Measures, as well as in Chapter II, Summary.

C. ENVIRONMENTAL REVIEW PROCESS

On June 18, 2003, LBNL issued a Notice of Preparation (NOP) to governmental agencies, organizations, and interested persons for a project that included both Building 49 and an ancillary parking lot, known as the G-4 Parking Lot, which was to have been constructed using excavated material from the Building 49 site. Following receipt of comments on the NOP and a public scoping meeting, the Lab revised the project description to eliminate the G-4 Parking Lot and instead proposed hauling the material excavated from the Building 49 site to an off-Lab location. LBNL issued a Revised Notice of Preparation for the revised project on August 6, 2003. It is this latter, revised project that is the subject of this Draft EIR.

Both the original June 2003 NOP and the Revised NOP are included as appendices to this EIR, as are comments on the scope of the EIR that were received in response to the two NOPs and comments received at a public scoping meeting, which was held on June 30, 2003, at the North Berkeley Senior Center at 1901 Hearst Avenue to provide the public another opportunity to present comments on the proposed content of the EIR. The meeting was advertised and the public was invited to attend. Comments received regarding the proposed content of the EIR have been addressed in the scope of this Draft EIR.

This Draft EIR will be published and circulated for review and comment by the public and other interested parties, agencies, and organizations for a 45-day period. The public review period will be from September 19, 2003, to November 3, 2003. **A public hearing on the Draft EIR will be held from 7:00 pm to 9:00 pm on October 20, 2003 at the North Berkeley Senior Center. The North Berkeley Senior Center is located at 1901 Hearst Street in Berkeley.** The public is invited to attend the hearing and to offer comments on the Draft EIR. All comments or questions about the Draft EIR should be addressed to:

Jeff Philliber
Environmental Planning Group
Lawrence Berkeley National Laboratory
One Cyclotron Road, MS 90K
Berkeley, CA 94720

Following the public review, responses to all substantive comments received on the adequacy of the Draft EIR and submitted within the specified review period will be prepared and included in the Final EIR. The Regents will then review and consider the Final EIR prior to any decision to approve, revise and approve, or reject the proposed project. It is anticipated at this time that the Final EIR will be reviewed by The Regents at their December 2003 / January 2004 meetings. Prior to approval by The Regents of the proposed project, the University must certify the Final EIR as complete and adequate and adopt a Mitigation Monitoring Program.

Project requirements and required mitigation measures identified in the EIR and Mitigation Monitoring Program adopted by The Regents shall be implemented by LBNL and, as appropriate, the third-party developer of the project. Such requirements that are applicable to the developer shall be written into the contract or other agreements between the University and the developer,

as appropriate. LBNL shall oversee proper implementation of these requirements and will monitor implementation of the mitigation program.

Projects taking place at LBNL that use federal funding or discretionary approvals require review and approval pursuant to the National Environmental Policy Act (NEPA). The proposed Building 49, however, would not have this “federal nexus” and thus would not trigger NEPA review. The project would take place on a University-owned, non-DOE leased parcel at LBNL. Furthermore, the project would be constructed entirely with private funds. A decision to lease space and move DOE-funded operations into the building, once constructed, would require NEPA review and will be appropriately reviewed at the time that a building lease is proposed.

D. ORGANIZATION OF THE DRAFT EIR

This EIR is organized to allow the reader to quickly and logically review a summary of the analysis, review the recommended mitigation measures, and identify the residual environmental impacts after mitigation, if any (see Chapter II, Summary). Those readers who wish to read the Draft EIR in greater detail are directed to Chapter IV, Environmental Setting, Impacts, and Mitigation Measures.

The Draft EIR begins with this Introduction (Chapter I). The chapters following the Introduction are organized as follows:

Chapter II, Summary, describes the proposed project, the controversial issues associated with the project, the environmental effects of the project, and alternatives to the project (including the No Project Alternative). The Summary includes Table II-1, Summary of Environmental Impacts and Mitigation Measures, which lists each identified environmental impact, corresponding mitigation measure(s), and the residual level of significance following implementation of mitigation.

Chapter III, Project Description, provides a description of the project site and location, the project objectives, the proposed project characteristics, and an outline of the approval process.

Chapter IV, Environmental Setting, Impacts, and Mitigation Measures, contains an analysis of environmental topics. The discussion of each topic is divided into an *introductory paragraph* that describes the scope of the issue under consideration, the *Setting* section that describes baseline environmental information, the *Project Impacts and Mitigation Measures* section that sets forth general standards of significance for potential impacts, and describes the project-specific impacts and mitigation measures, and the *Cumulative Impacts* section that describes the cumulative impacts, if any, of the proposed project, in conjunction with other applicable projects.

Chapter V, Alternatives, provides an analysis of a reasonable range of alternatives to the proposed project. As required by the CEQA Guidelines, a discussion of the reasons for selecting the alternatives analyzed in this section is provided, along with a comparative analysis of each alternative and identification of the “environmentally superior” alternative.

Chapter VI, CEQA Considerations, reviews the significant, irreversible effects (if any) and cumulative impacts identified in Chapter IV, and describes the project's potential for inducing growth, as well as the short-term use versus long-term productivity of the proposed project, as required by CEQA.

Chapter VII, Report Preparation, lists the firms and staff members that prepared the EIR.

Chapter VIII, Agencies and Persons Contacted, lists the persons, agencies, and organizations who were contacted during preparation of the EIR.

Chapter IX, Bibliography, provides a list of documents cited in the EIR.

Chapter X, Glossary, presents an explanation of acronyms and abbreviations used in the EIR.

Chapter XI, Appendices, presents the background documents and technical information used in support of the impact analyses provided in the EIR. Appendix A contains the revised NOP and responses. Appendix B is the NOP for the original project, along with responses received to the NOP.

CHAPTER II

SUMMARY

A. PROJECT DESCRIPTION

Lawrence Berkeley National Laboratory (LBNL) seeks to construct a new six-story, 65,000-square-foot office building to help address a shortage of office space at LBNL that results in overcrowded work conditions for many staff. The new building, to be constructed by a third-party developer to avoid the need for government funding, would be on a 1.08-acre site at the Lab, which is situated on approximately 200 acres in the Berkeley-Oakland hills that are owned by the University of California and leased to the U.S. Department of Energy (DOE). The project site, near LBNL's main Blackberry Gate entrance on Cyclotron Road, is currently undeveloped. It lies upslope from and southeast of the north fork of Strawberry Creek, on a steep slope of non-native annual grasses, with approximately 30 trees, mostly eucalyptus and coast live oak.

The new building, to be designated Building 49, would include a partial ground floor with access from Cyclotron Road; four full-sized floors with open work stations; and a partial sixth floor, with access from East Road, that would have a series of meeting rooms. It would be designed to complement the natural features of its site, as well as adjacent buildings and the predominant architectural style of LBNL. The building would include no laboratory facilities or fixtures, nor any specialized air-handling equipment.

Because the new building is proposed to alleviate overcrowding in other LBNL buildings, all of the project's projected 240 work spaces would be held by existing LBNL scientific and scientific support staff, mostly moving from the Building 50 complex and the Building 70 complex.

Building 49 would include ten parking spaces, primarily for fleet parking and short-term deliveries, as well as disabled motorists, along with bicycle parking spaces and employee showers. The ground/entry level would provide space for a lobby accessible from Cyclotron Road and space for building services; there also would be a rooftop utility penthouse. The project would include a small service yard along Cyclotron Road.

Construction of Building 49 would require excavation of up to approximately 26,000 cubic yards of soil, which would be hauled off-site and used as clean fill, either in a nearby construction project or as clean cover material in a landfill. A reinforced concrete retaining wall would be constructed along the west side of East Road, where excavation would occur to create the pad for Building 49. With the exception of a cluster of coast live oaks in the northernmost portion of the project site, the proposed project would require that trees on the project site be removed to accommodate the building footprint, walkways, grading, and construction activities. Areas disturbed by the construction would be replanted in accordance with LBNL's Integrated

Landscape Management Program. Plant stock would be drought-tolerant and deer proof, require low maintenance and fertilization, and be native to the East Bay. Also in accordance with LBNL's Integrated Landscape Management Program, future landscaping plans would be cognizant of fire and fuel management concerns.

Surface runoff from the proposed Building 49 site would be routed into the LBNL storm drain system at points downslope and to the south of the proposed building. The drainage system would be capable of handling a 25-year storm of 2.5 inches of rain per hour. To the greatest extent possible, existing pervious surfaces would be preserved to minimize the amount of storm runoff. The entry plazas located on levels one and six would be a combination of paved and planted areas.

Construction would take place over an 18-month period, beginning in Spring 2004 and ending in approximately Fall 2005. Excavation would occur for up to 3 months, during which time truck trips for off-site soil hauling would be limited to the hours between 9:00 a.m. and 4:00 p.m.

B. AREAS OF POTENTIAL CONTROVERSY

Water quality, biological resources, and visual impacts were the principal areas of controversy regarding the project as originally proposed and as described in the June 2003 Notice of Preparation (NOP). As noted in Chapter I, Introduction, that project included an ancillary parking lot, known as the G-4 Parking Lot, which was to have been constructed using excavated material from the Building 49 site. A number of persons commenting on the NOP objected to the parking lot component of the June 2003 project description because construction of the parking lot would have required that fill be placed within two intermittent jurisdictional drainages, and that relatively dense foliage and trees, including coast live oaks, would have to be removed. Many concerns were expressed regarding effects on biological, water quality, and visual resources at the Lab.

With the deletion of the G-4 Parking Lot from the project as currently proposed – and as analyzed in this EIR – there are no known areas of major controversy. As with any construction project, the Lab anticipates that some nearby observers may be temporarily inconvenienced by construction activity, including noise and truck traffic. Although not issues of major controversy, some public concerns have been expressed to the Lab about cumulative truck traffic in the City of Berkeley and slope stability and seismic safety factors involved with the proposed building site. A few individuals have also requested that Berkeley Lab emphasize the redevelopment of sites currently occupied by obsolete buildings.

C. IMPACTS AND MITIGATION MEASURES

Potential environmental impacts of the project are summarized in Table II-1 on page II-8. For each significant impact, the table includes a summary of mitigation measure(s) and an indication of whether the impact would be mitigated to a less-than-significant level. Please refer to Chapter IV, Environmental Setting, Impacts, and Mitigation Measures, for a complete discussion of each impact and associated mitigation.

As stated in Table II-1 and in Chapter IV, the project would not result in any significant impacts that could not be mitigated to a less-than-significant level through implementation of mitigation measures included in the 1987 LRDP EIR, as amended, and/or project-specific mitigation measures identified in this report.

D. ALTERNATIVES TO THE PROJECT

Chapter V of this EIR analyzes five separate alternatives to the proposed project, including the No Project Alternative, required by CEQA for all EIRs; a Grizzly Peak Off-Site Soil Disposal Alternative; a Building 90 Complex Trailer Site Alternative; a Reduced Footprint Alternative; and a Reduced Building Height Alternative. Chapter V also briefly discusses and rejects from further consideration several other alternatives.

1. NO PROJECT ALTERNATIVE

Under this alternative, Building 49 would not be constructed. Conditions on the project site would remain as they are at present, at least for the short term. This alternative would not preclude future development of the site, which is identified in the LBNL LRDP as a potential future building site.

This alternative would not result in any of the project's impacts, as described in Chapter IV of this EIR. Conditions on the project sites would remain unchanged for the foreseeable future, and Berkeley Lab would continue to operate at current levels of overcrowding in existing buildings. Because these staff would continue to work in older buildings, they would not realize the benefit of working in a newly constructed facility that adheres to the latest seismic and fire standards.

2. OFF-SITE SOIL DISPOSAL—GRIZZLY PEAK ROUTE

Under this alternative, excavated soil from Building 49 construction would be transported off-site for disposal via trucks using Strawberry Gate to Grizzly Peak Boulevard, to Fish Ranch Road to State Route 24. As with the project, approximately 2,170 total truck loads would be needed to transport the approximately 26,000 cubic yards of soil to landfills or other destinations. This soil hauling would be spread over the three-month period when site excavation is scheduled to occur.

In general, impacts of this alternative would be the same as those of the proposed project because the same building would be constructed. The difference between this alternative and the project is that, with this alternative, haul trucks would use a different route to and from the site during the up to three-month period of site excavation. Under this alternative, the 26,000 cubic yards of excavated soils would be hauled to an off-site landfill via Cyclotron Road and Lawrence Road to Centennial Drive (via Strawberry Gate), to Grizzly Peak Boulevard, to Fish Ranch Road to State Route 24. The destination(s) of the material (i.e., Hayward or Martinez, or both) would dictate in which direction trucks would then travel on State Route 24. The same number of trucks would occur as with the project (33 trucks per day generating 66 daily one-way trips, with average of nine one-way trips per hour).

Construction-generated traffic would be temporary and therefore would not result in long-term degradation in operating conditions on project roadways. The estimated increase in traffic volumes caused by project-generated haul truck traffic on the above-described haul route would not be substantial, and would not significantly disrupt daily traffic flow on these roadways. The primary impacts from construction truck traffic would include a temporary and intermittent reduction of roadway capacities due to the slower movements (accentuated by the uphill alignment of the roads on which the full trucks would have to travel) compared to passenger vehicles. However, the estimated number of construction-generated vehicle trips (i.e., a maximum of one truck every 6.5 minutes between 9:00 a.m. and 4:00 p.m.) would not cause significant traffic delays.

If project truck traffic were to occur during the hours of 7:00 to 9:00 a.m. and 4:00 to 6:00 p.m., the added volume would coincide with peak-hour traffic and could impede traffic flow. The LBNL-proposed measure restricting truck traffic during the a.m. and p.m. peak periods would minimize disruption of the general traffic flow on affected roadways during those times.

This alternative could create some delays and present traffic hazards to drivers, bicyclists, and pedestrians who use the steep Centennial Drive and Grizzly Peak roads, and to users of the Lawrence Hall of Science, particularly where the trucks would turn left onto uphill traffic across from the Strawberry Gate. Contractors would implement standard Best Management Practices in order to mitigate any short-term construction-related transportation impacts. Generally, these practices include implementation of a traffic control plan, such as measures (e.g., advance warning signs, flaggers to direct traffic, and advance notification of interested parties about the location, timing, and duration of construction activity) to maintain safe and efficient traffic flow during the construction period. The effect on traffic conditions would be less than significant.

3. BUILDING 49 – BUILDING 90 COMPLEX TRAILER SITE

Under this alternative, Building 49 would be constructed in the northwest area of Berkeley Lab, adjacent to Building 90 where the Building 90 complex trailer site is currently located. This action would require the relocation of the 75 occupants of those trailers, followed by removal of the trailers, and site preparation. It would also reduce the size of the accompanying Building 90 complex parking lot by approximately 50 spaces. Some excavation would be required to provide for foundation and basement-level area required by the building, but substantially less than with the proposed project.

This site is generally shielded from off-site views by screening trees and terrain, but that the upper floors of Building 49 under this alternative likely would be visible from some off-site viewpoints in Berkeley; such views of the building would be somewhat more noticeable than those under the proposed project, because Building 90 would not serve as a prominent backdrop for the building in the same way that the Building 50 complex would. Nevertheless, such aesthetics impacts would be similar to those of the proposed project, and, with inclusion of appropriate LRDP EIR and project-specific mitigation, they would be less than significant.

Under this alternative, temporary and minor air emissions associated with excavation and the transport and removal of excavated soil would be greatly reduced. Other emissions, including those associated with construction of the building, transportation of construction equipment and supplies, and operation of the building, would be the same as those of the proposed project. Although construction would occur closer to the nearest off-site residential receptors than with the proposed project, construction noise would be somewhat decreased in duration due to the reduction in excavation. Construction would require approximately 900 truck trips for disposal of approximately 10,000 cubic yards of excavated materials and demolition debris. Because the type and size of development with this alternative would be identical to the proposed project, operational trip generation characteristics of this alternative would be the same as the proposed project (i.e., no net new vehicle trips). Impacts related to air quality, noise, and transportation would be less than significant, as with the proposed project.

Because the Building 90 Complex trailer site is generally flat and already developed, there would be no impact to biological resources except for the removal of up to 12 pine trees and 6 Australian willow trees used for landscaping. Minimal excavation and site stabilization would be necessary, compared to the project, and slope and sliding related hazards would be less of a concern than with the proposed project. Very little new impervious surface would be added to this site, compared to that with the proposed project; several small patches of landscaped areas would be lost, resulting in a small increase in impervious surface, compared to existing conditions, but considerably less than with the proposed project. Biological, geology, and hydrology impacts under this alternative would be less than significant, as with the project.

Effects related to hazardous materials, cultural resources, public services, utilities, service system, and energy would be essentially the same under this alternative as those of the proposed project, and, with inclusion of appropriate LRDP EIR and project-specific mitigation, they would be less than significant.

This alternative would be generally consistent with the Berkeley Lab 1987 LRDP. Land use and planning impacts under this alternative would be essentially the same as those of the proposed project, and, with inclusion of appropriate LRDP EIR and project-specific mitigation, they would be less than significant.

This alternative would pose several logistical land use and planning problems: the Building 90 complex trailer site is leased by the Department of Energy and could not be readily used by a third-party developer/building owner; it would require permanent removal of 50 parking spaces and immediate relocation of 75 current staff when such surge space for employees and parking is not readily available; it would locate a relatively large building in close proximity to a similarly large building without regard to adequate buffer space between the buildings and consideration of adequate parking, emergency access, and fire truck turn-around space; as a six-story building, Building 49 would block natural light and open views for which Building 90 was designed; and, it would preclude future uses of the site which might be more appropriate.

This alternative would not be practical within the time frame of the proposed project, which is to begin construction in the Spring of 2004 in order to begin alleviating space shortages by 2005. It would not meet the project's objectives to establish a "signature building that serves as a focal point for visitors." Finally, although it would reduce impacts associated with hauling excavated soil under the project, it would not "avoid or substantially lessen any of the significant effects of the project."

4. BUILDING 49 REDUCED SIZE – SAME PROJECT SITE

SMALLER BUILDING—REDUCED FOOTPRINT

Under this alternative, the proposed 15,000-square-foot footprint of the building would be reduced to approximately 12,000 square feet by reducing the length of the building by approximately 50 feet. This would reduce the increase in new impermeable area by about 20 percent and would reduce the amount of soil to be excavated by about 5,200 cubic yards. With this change in size, the building would contain approximately 52,000 square feet and would be able to accommodate about 190 occupants.

The reduced footprint alternative is not feasible because, while it would provide "decompression" space to alleviate some overcrowding in existing LBNL facilities, it would not maximize the amount of such additional office space on the proposed building site, and thus would be a less cost-efficient and space-efficient. It would be less likely that this alternative would be comparable to off-site leased office space over the life of the project. Furthermore, because the proposed project would not result in any significant, unavoidable impacts, this alternative would not meet the primary purpose of alternatives under CEQA, to "avoid or substantially lessen any of the significant effects of the project."

Under the reduced footprint alternative, operational transportation, air quality, and noise impacts would be essentially the same as those expected under the proposed project. With a smaller footprint, however, there would be about 20 percent fewer truck trips to haul excavated soil (about 440 fewer truckloads, resulting in about 1,730 round truck trips and a corresponding decrease in hauling time of about one to two weeks compared to the project). Emissions related to excavation, off-site soil transport, and construction therefore would be reduced, compared to those of the proposed project, and the duration of overall construction noise would be reduced by up to a few weeks. With inclusion of appropriate LRDP EIR and project-specific mitigation, these impacts would be less than significant.

Compared to the proposed project, the upper floors of the building would continue to be visible from a number of off-site viewpoints, although the profile would be marginally reduced under this alternative. As this would be seen against the backdrop of the relatively massive Building 50 complex, this impact would continue to be less than significant with inclusion of appropriate LRDP EIR and project-specific mitigation.

Effects related to the size and location of the building footprint, such as biological resources, geology, hydrology, and cultural resources, could be incrementally reduced, compared to the

proposed project, because the footprint would be 20 percent smaller with this alternative. For instance, up to four additional trees might be spared removal, there would be a reduction in the amount of soil removed and the area of the slope that would be modified and stabilized, and less impervious surface area would be created, thus reducing the incremental increase in runoff, compared to the project. Effects related to land use, hazardous materials, public services and utilities, and energy also would be essentially the same as with the proposed project, because the nature of the building and its programming would be the same, simply reduced in scale. With inclusion of appropriate LRDP EIR and project-specific mitigation, all of these impacts would be less than significant.

SMALLER BUILDING—REDUCED HEIGHT

Under this alternative, the proposed six-story, approximately 85-foot height of the building would be reduced to five floors and approximately 70 feet in height, including partial first and fifth floors and complete second-through-fourth floors. This would reduce the building area by about 20 percent to approximately 52,000 square feet and would accommodate about 190 occupants. It would not decrease the impermeable area created by the project.

The reduced building height alternative is not feasible because, while it would provide “decompression” space to alleviate some overcrowding in existing LBNL facilities, it would not maximize the amount of such additional office space on the proposed building site, and thus would be a less cost-efficient and space-efficient. It would be less likely that this alternative would be comparable to off-site leased office space over the life of the project. Furthermore, because the proposed project would not result in any significant, unavoidable impacts, this alternative would not meet the primary purpose of alternatives under CEQA, to “avoid or substantially lessen any of the significant effects of the project.”

Under this alternative, transportation, air quality, and noise impacts all would be generally the same as those with the proposed project, both for construction and operation, because, while the building would have fewer occupants, other LBNL employees who would have moved to Building 49 would remain in nearby buildings. Effects related to the size and location of the building footprint, such as biological resources, geology, hydrology, and cultural resources, would be the same as those of the proposed project, because the footprint would be the same. Effects related to land use, hazardous materials, public services and utilities, and energy also would be essentially the same as with the proposed project, because the nature of the building and its program would be the same, albeit reduced in scale. With inclusion of appropriate LRDP EIR and project-specific mitigation, all of these impacts would be less than significant.

Under the reduced height alternative, the upper portion of the building would be substantially less visible from off-site viewpoints than under the proposed project. Nevertheless, it would be visible from some off-site viewpoints. As this would be seen against the backdrop of the relatively massive Building 50 complex, this impact would continue to be less than significant with inclusion of appropriate LRDP EIR and project-specific mitigation.

TABLE S-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

| ENVIRONMENTAL IMPACT | MITIGATION MEASURES | LEVEL OF SIGNIFICANCE AFTER MITIGATION |
|---|---|---|
| A. <u>Aesthetics</u> | | |
| A.1: Construction of the proposed project, including all earthmoving activities such as excavation and grading, would result in a change to the visual quality of the site and its surroundings. (Less than Significant) | None required. | LS |
| A.2: The project would result in a change to the scenic vistas of which the proposed project site is a part. (Less than Significant) | None required. | LS |
| A.3: The project would alter the existing visual character of the site and its surroundings. (Less than Significant) | None required | LS |
| A.4: The project would increase the amount of light and glare emitted from the project site. (Less than Significant) | None required | LS |
| A.5: The project, when combined with other proposed onsite and nearby development, such as the recently approved Molecular Foundry, would result in a visual change to the area. (Less than Significant) | None required | LS |
| B. <u>Air Quality</u> | | |
| B.1: Project-related construction activities would generate short-term emissions of criteria pollutants, including suspended and inhalable particulate matter and equipment exhaust emissions. (Significant) | B.1: During construction, the project sponsor shall require the construction contractor to implement BAAQMD's basic dust control procedures required for sites smaller than four acres, such as the project site, to maintain project construction-related impacts at acceptable levels; this mitigates the potential impact to less than significant. Elements of the dust abatement program shall include, but not be limited to the following: watering construction sites at least twice daily, or as needed to sufficiently reduce dust emissions; covering haul trucks; paving, watering or otherwise treating unpaved surfaces to reduce dust; and street sweeping. | LS |
| LS – LESS THAN SIGNIFICANT | | |

TABLE S-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

| ENVIRONMENTAL IMPACT | MITIGATION MEASURES | LEVEL OF SIGNIFICANCE AFTER MITIGATION |
|---|---|---|
| B. <u>Air Quality</u> (cont.) | | |
| B.2: The project could result in an increase in criteria pollutant emissions. (Less than Significant) | None required. | LS |
| B.3: The project would not result in a cumulatively considerable contribution to regional air quality impacts. (Less than Significant) | None required | LS |
| C. <u>Biological Resources</u> | | |
| C.1: Construction of the project, including all earthmoving activities such as excavation and grading, would result in the permanent removal of approximately 1.1 acres of existing vegetation. (Less than Significant) | None required. | LS |
| C.2: Construction activities could adversely affect nesting raptors and other special-status nesting birds. (Significant) | C.2: Avoid disturbing active nests of raptors and other special-status bird species within 500 feet of the proposed project footprint. If construction activities commence during the breeding season (February 1 through July 31), conduct preconstruction surveys of potential nesting habitat within 500 feet of construction. If active nests are found, establish an adequate buffer zone during breeding season or until young have fledged. | LS |
| C.3: Removal of trees and other proposed construction activities during the breeding season could result in direct mortality of special-status bats. In addition, construction noise and human disturbance could cause roost abandonment and death of young. (Significant) | C.3: Avoid disturbance of the roosts of special-status bats during the breeding season. If construction activities occur during the breeding season (March 1 through August 31), conduct preconstruction surveys of potential breeding habitat within 200 vertical feet of construction. If active roosts are identified during preconstruction surveys, establish a buffer acceptable to CDFG during the breeding season. | LS |
| LS – LESS THAN SIGNIFICANT | | |

TABLE S-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

| ENVIRONMENTAL IMPACT | MITIGATION MEASURES | LEVEL OF SIGNIFICANCE AFTER MITIGATION |
|--|--|---|
| C. <u>Biological Resources</u> (cont.) | | |
| C.4: The proposed project has a low potential for take or harassment of Alameda whipsnakes potentially dispersing through the project vicinity. (Significant) | <p>C.4a: Daily site surveys for Alameda whipsnake shall be carried out by a designated monitor.</p> <p>C.4b: Worker environmental sensitivity training shall be conducted by the designated monitor prior to each worker's commencing activities on-site.</p> <p>C.4c: Hours of operation and speed limits shall be instituted and posted.</p> <p>C.4d: Site vegetation management shall take place prior to tree removal, grading, excavation, or other construction activities. Construction materials, soil, construction debris, or other material shall be deposited only on areas where vegetation has been mowed such that the absence of any snakes can be visually confirmed.</p> <p>None required.</p> <p>None required.</p> <p>None required.</p> | <p>LS</p> <p>LS</p> <p>LS</p> |
| C.5: The proposed project could harm or temporarily disturb common wildlife species. (Less than Significant) | None required. | LS |
| C.6: Construction activities have low potential to disturb or result in mortality of special status plant species or eliminate their habitat. (Less than Significant) | None required. | LS |
| C.7: The project, when combined with other proposed on-site LBNL development, as well as surrounding residential development in the Oakland-Berkeley Hills, would contribute to a reduction of natural resources, including habitat for native plants and wildlife. (Less than Significant) | None required. | LS |
| LS – LESS THAN SIGNIFICANT | | |

TABLE S-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

| ENVIRONMENTAL IMPACT | MITIGATION MEASURES | LEVEL OF SIGNIFICANCE AFTER MITIGATION |
|---|---|---|
| D. <u>Cultural Resources</u> | | |
| D.1: Construction of the proposed project could result in discovery of and/or inadvertent damage to important prehistoric (Native American) or historic archaeological resources. (Significant) | D.1a: If an archaeological and/or paleontological artifact were discovered onsite during construction, all activities within a 50-foot radius would be halted and a qualified archaeological/paleontological monitor would be summoned within 24 hours to inspect the site. If the find were determined to be significant and to merit formal recording or data collection, time and funding would be devoted to salvage the material. Any archaeologically important data recovered during monitoring would be cleaned, catalogued and analyzed, with the results presented in a report of finding that satisfies professional standards. D.1b: In the event that human skeletal remains were uncovered during construction or ground-breaking activities on the project site, all work would immediately halt and the Alameda County Coroner would be contacted to evaluate the remains. | LS |
| D.2: The project would not affect historic architectural resources located within the vicinity of the project site. (Less than Significant) | None required. | LS |
| D.3: The project, when combined with other proposed on-site LBNL and nearby development, such as the recently approved Molecular Foundry, could affect archaeological resources. (Less than Significant) | None required. | LS |
| LS – LESS THAN SIGNIFICANT | | |

TABLE S-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

| ENVIRONMENTAL IMPACT | MITIGATION MEASURES | LEVEL OF SIGNIFICANCE AFTER MITIGATION |
|---|---------------------|---|
| <u>E. Geology and Soils</u> | | |
| E.1: Construction of the proposed project, including earthmoving activities such as excavation and grading, could result in soil erosion. (Less than Significant) | None required. | LS |
| E.2: The proposed project would expose people or structures to seismic hazards such as groundshaking and earthquake-induced landsliding or settlement. (Less than Significant) | None required. | LS |
| E.3: The proposed project would expose people or structures to geologic hazards such as settlement and expansive soils. (Less than Significant) | None required. | LS |
| E.4: The proposed project, when combined with other proposed on-site LBNL and nearby development, including the Molecular Foundry, would not result in significant adverse geologic and soils impacts. (Less than Significant) | None required. | LS |
| <u>F. Hazards and Hazardous Materials</u> | | |
| F.1: Construction of the proposed project, including all earthmoving activities such as excavation and grading, could expose construction workers or the environment to hazardous materials. (Less than Significant) | None required. | LS |
| F.2: The project would expose people or structures to wildland fire hazards, but would not impair implementation of or physically interfere with emergency response or evacuation plans. (Less than Significant) | None required. | LS |
| F.3: The proposed project, when combined with other proposed on-site LBNL and nearby development, including the Molecular Foundry, would result in an increased exposure to hazards and hazardous materials. (Less than Significant) | None required. | LS |
| LS – LESS THAN SIGNIFICANT | | |

TABLE S-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

| ENVIRONMENTAL IMPACT | MITIGATION MEASURES | LEVEL OF SIGNIFICANCE AFTER MITIGATION |
|---|---|---|
| <u>G. Hydrology and Water Quality</u> | | |
| G.1: Construction of the proposed project, including earthmoving activities such as excavation and grading, could result in soil erosion and subsequent sedimentation of stormwater runoff or an increase in stormwater pollutants associated with construction-related hazardous materials. (Less than Significant) | None required. | LS |
| G.2: The proposed project would adversely affect stormwater quality. (Less than Significant) | G.2: LBNL shall prepare and develop design specifications for a Storm Water Design Plan to significantly reduce and where feasible, eliminate, the off-site migration of sediment and storm water pollutants associated with storm water runoff. | LS |
| G.3: The proposed project would increase stormwater runoff rates and volumes. (Less than Significant) | None required. | LS |
| G.4: The proposed project, when combined with other proposed on-site LBNL development, including the Molecular Foundry, would result in hydrologic or water quality impacts. (Less than Significant) | None required. | LS |
| <u>H. Land Use and Planning</u> | | |
| H.1: Construction of the proposed project would create temporary and intermittent impacts that could affect adjacent land uses. (Less than Significant) | None required. | LS |
| H.2: The proposed project would introduce new office uses onto a currently undeveloped LBNL site. (Less than Significant) | None required. | LS |
| H.3: The proposed project, when combined with other proposed onsite LBNL and nearby development, such as the recently approved Molecular Foundry, would result in new land uses in the area. (Less than Significant) | None required. | LS |
| LS – LESS THAN SIGNIFICANT | | |

TABLE S-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

| ENVIRONMENTAL IMPACT | MITIGATION MEASURES | LEVEL OF SIGNIFICANCE AFTER MITIGATION |
|---|--|--|
| <u>I. Noise</u> | | |
| I.1: Construction activities associated with the project would intermittently and temporarily generate noise levels above existing ambient levels in the project vicinity. (Significant) | I.1: To reduce daytime noise impacts due to construction, LBNL shall require construction contractors to implement noise reduction measures, including limiting the hours of construction (7:00 a.m. - 7:00 p.m. weekdays and 8:00 a.m. to 4:00 p.m. Saturday); use of best available noise control techniques on equipment and trucks; use of hydraulic or electric impact tools wherever possible; keeping noise from idling trucks to a minimum; placement of stationary noise sources as far from adjacent receptors as possible, and muffling and enclosing such noise sources as feasible; and notification of neighbors within 500 feet, including residents along Highland Place, at least two weeks prior to the start of excavation, including provision of a contact person for noise complaints | LS |
| I.2: Project operational noise such as mechanical equipment noise would not result in a substantial permanent increase in ambient noise levels at sensitive receptors. (Less than Significant) | None required. | LS |
| I.3: The project together with anticipated future development at LBNL and in the surrounding area could result in a cumulative increase in noise levels. (Less than Significant) | None required. | LS |
| <u>J. Public Services</u> | | |
| J.1: Project construction would result in a temporary impact to fire and police response times. (Less than Significant) | None required. | LS |
| J.2: Project operation would result in a marginal increase in demand for police and fire protection services. (Less than Significant) | None required. | LS |
| LS – LESS THAN SIGNIFICANT | | |

TABLE S-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

| ENVIRONMENTAL IMPACT | MITIGATION MEASURES | LEVEL OF SIGNIFICANCE AFTER MITIGATION |
|---|---------------------|---|
| J. <u>Public Services</u> (cont.) | | |
| J.3: The proposed project, together with anticipated future development at LBNL and in the surrounding area, could result in a cumulative increase in demand for police and fire protection services. (Less than Significant) | None required. | LS |
| K. <u>Traffic/Transportation</u> | | |
| K.1: Construction of the proposed project, including all earthmoving activities such as excavation and grading, would result in a temporary increase in traffic volumes on roadways used by construction-related vehicles. (Less than Significant) | None required. | LS |
| K.2: The project would not adversely affect traffic patterns in the project area. (Less than Significant) | None required. | LS |
| K.3: The project would not affect parking in the project area. (Less than Significant) | None required. | LS |
| K.4: The project would not adversely affect transit service in the project area. (Less than Significant) | None required. | LS |
| K.5: The project would introduce added people and turning vehicles in the immediate project areas, potentially affecting access and safety. (Less than Significant) | None required. | LS |
| K.6: The proposed project, when combined with other proposed on-site Lab development, including the Molecular Foundry, could affect traffic patterns in the project area. (Less than Significant) | None required. | LS |
| LS – LESS THAN SIGNIFICANT | | |

TABLE S-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

| ENVIRONMENTAL IMPACT | MITIGATION MEASURES | LEVEL OF SIGNIFICANCE AFTER MITIGATION |
|--|---|---|
| <u>L. Utilities</u> | | |
| L.1: Project construction would generate construction waste and debris. (Significant) | L.1: During construction, LBNL shall be required to maximize diversion of the byproducts of construction. The project sponsor shall develop a plan for maximizing diversion of construction materials associated with the construction of the proposed project from landfill disposal. | LS |
| L.2: The project would not substantially increase the demand for water services. (Less than Significant) | None required. | LS |
| L.3: The project would generate wastewater. (Less than Significant) | None required. | LS |
| L.4: The project would generate solid waste. (Less than Significant) | None required. | LS |
| L.5: The project would create additional demand for electricity and natural gas service. (Less than Significant) | None required. | LS |
| L.5: The project, in concert with other development at LBNL and in the surrounding area, would cumulatively contribute to demand for utilities. (Less than Significant) | None required. | LS |

LS – LESS THAN SIGNIFICANT

**TABLE S-2
EXISTING MITIGATION MEASURES FROM THE 1987 LRDP EIR, AS AMENDED,
TO BE APPLIED TO THE PROJECT**

Aesthetic Resources

Mitigation Measure III-F-1a:

Buildings will occupy as limited a footprint as feasible. They will incorporate features that enhance flexibility and future versatility.

Mitigation Measure III-F-1b:

Buildings will be planned to blend with their surroundings and be appropriately landscaped. Planned objectives will be for new buildings to retain and enhance long distance view corridors and not to compromise views from existing homes. New buildings will generally be low rise construction.

Mitigation Measure III-F-2:

Any new facilities will not use reflective exterior wall materials or reflective glass, to mitigate the potential impacts of light and glare.

Mitigation Measure III-D-2a:

Revegetation of disturbed areas, including slope stabilization sites, using native shrubs, trees, and grasses will be included as part of all new projects

Air Quality

Mitigation Measure III-J-1:

Construction contract specifications would require that during construction exposed surfaces would be wetted twice daily or as needed to reduce dust emissions. In addition, contract specifications would require covering of excavated materials.

Mitigation Measure III-J-2:

LBNL will design building ventilation systems to minimize emission of criteria air pollutants following compliance with all applicable regulatory requirements (e.g., NSR [new source review]). Although this impact was not found to have exceeded the BAAQMD's threshold for significance, the 1987 LRDP EIR, as amended, conservatively identified this impact as not fully mitigated by Mitigation Measure III-J-2 "for the purposes of this SEIR."

Biological Resources

Mitigation Measure III-D-2a:

Revegetation of disturbed areas, including slope stabilization sites, using native shrubs, trees, and grasses will be included as a part of all new projects.

Mitigation Measure III-D-2b:

Invasion of opportunistic colonizer trees and shrubs will be controlled. A maintenance program for controlling further establishment of eucalyptus, green wattle acacia, French broom, cotoneaster, and other opportunistic colonizer shrubs and trees in disturbed areas on-site will be undertaken. Herbicides will not be used for this purpose.

Mitigation Measure III-D-2c:

Removal of native trees and shrubs will be minimized. (To the greatest extent possible, the removal of large coast live oak, California bay, and Monterey pine trees will be avoided.)

TABLE S-2 (Continued)
EXISTING MITIGATION MEASURES FROM THE 1987 LRDP EIR, AS AMENDED,
TO BE APPLIED TO THE PROJECT

Biological Resources (cont.)

Mitigation Measure III-D-2d:

Disturbance to the site perimeter buffer zones will be minimized.

Mitigation Measure III-D-2e:

LBNL activity and encroachment in Blackberry Canyon will be minimized.

Geological Resources

Mitigation Measure III-B-1:

Geologic and soils studies will be undertaken during the design phase of each LBNL building project. Recommendations contained in those studies would be followed to ensure that the effects of landsliding, lurching, and liquefaction potential will not represent a significant adverse impact during a seismic event.

Mitigation Measure III-B-2a:

Excavation and earth moving will be designed for stability, and accomplished during the dry season when feasible. Drainage will be arranged to minimize silting, erosion, and landsliding. Upon completion, all land will be restored, covering exposed earth with planting.

Mitigation Measure III-B-2b:

Foundations for proposed structures will be designed in accordance with geologic and soils engineering recommendations to minimize the long-term possibilities of landslide.

Mitigation Measure III-B-2c:

Excavations will be shored as required by law to preclude minor short-term landslides during construction.

Mitigation Measure III-B-2d:

Revegetation of disturbed areas, including slope stabilization sites, using native shrubs, trees and grasses will be included as part of all new projects.

Hazardous Materials

Mitigation Measure IV-K-1:

LBNL will prepare an annual self-assessment summary report. The report will summarize environment, health, and safety program activities, and identify any areas where LBNL is not in compliance with laws and regulations governing hazardous materials, hazardous waste, hazardous materials transportation, regulated building components, worker safety, emergency response, and remediation activities.

Mitigation Measure IV-K-2a:

Prior to shipping any hazardous materials to any hazardous waste treatment, storage or disposal facility, LBNL will confirm that the facility is licensed to receive the type of waste LBNL is proposing to ship to that facility.

Mitigation Measure IV-K-2b:

LBNL will continue its waste minimization programs and strive to identify new and innovative methods to minimize hazardous waste generated by LBNL activities.

TABLE S-2 (Continued)
EXISTING MITIGATION MEASURES FROM THE 1987 LRDP EIR, AS AMENDED,
TO BE APPLIED TO THE PROJECT

Hazardous Materials

Mitigation Measure IV-K-3:

LBNL will require hazardous waste haulers to provide evidence that they are appropriately licensed to transport the type of wastes being shipped from LBNL.

Mitigation Measure IV-K-5:

In addition to implementation of the numerous employee communication and training requirements included in regulatory programs, LBNL will undertake the following additional measures as ongoing reminders to workers of health and safety requirements:

Posting, in areas where hazardous materials are handled, of phone numbers of LBNL offices which can assist in proper handling procedures and emergency response information.

Continuing to post “Emergency Response and Evacuation Plans” in all LBNL buildings.

Continuing to post all sinks in areas where hazardous materials are handled with signs reminding users that hazardous wastes cannot be poured down the drain.

Continuing to post dumpsters and central trash collection areas where hazardous materials are handled with signs reminding users that hazardous wastes cannot be disposed of as trash.

Mitigation Measure IV-K-6:

LBNL will update its emergency preparedness and response program on an annual basis, and will provide copies of this program to local emergency response agencies and to members of the public upon request.

Hydrology and Water Quality

Mitigation Measure III-B-2a:

Excavation and earth moving will be designed for stability, and accomplished during the dry season when feasible. Drainage will be arranged to minimize silting, erosion, and landsliding. Upon completion, the land will be restored, covering exposed earth with planting.

Mitigation Measure III-B-2d:

Revegetation of disturbed areas, including slope stabilization sites, using native shrubs, trees, and grasses, will be included as part of all new projects.

Mitigation Measure III-C-2:

Each individual project will continue to be designed and constructed with adequate storm drainage facilities to collect surface water from roofs, sidewalks, parking lots and other surfaces and deliver it into existing channels which have adequate capacity to handle the flow.

Land Use and Plans

Mitigation Measure III-G-2:

Buildings proposed for development at LBNL will follow the design guidelines contained in the LBNL LRDP, as amended.

TABLE S-2 (Continued)
EXISTING MITIGATION MEASURES FROM THE 1987 LRDP EIR, AS AMENDED,
TO BE APPLIED TO THE PROJECT

Noise

Mitigation Measure III-K-1:

Projected noise levels will be compared with ambient noise levels and the Berkeley Noise Ordinance limits, or other applicable regulations. Acoustical performance standards would be included in future construction documents. LBNL will continue to design, construct and operate buildings and building equipment taking into account measures to reduce the potential for excessive noise transmission.

Mitigation Measure III-K-2:

Noise-generating construction equipment will be located as far as possible from existing buildings. If necessary, windows of laboratories or offices will be temporarily covered to reduce interior noise levels on-site.

Traffic and Parking

Mitigation Measure III-I-1a:

Discourage single occupant vehicle use and encourage the use of other transportation options. LBNL will continue to implement its Transportation System Management (TSM) Program. The specific features of this program include:

Establishing transportation modal-split goals for LBNL which will result in a reduction in the number and percentage of single-occupant automobiles being driven to and from LBNL;

Assigning a transportation planner to coordinate the design and implementation of TSM programs;

Promoting carpools by creating a carpool matching program;

Providing preferential carpool parking;

Developing a vanpooling program through funding support of Berkeley TRIPS;

Permitting staggered (flex-time) work hours;

Developing an annual monitoring program to evaluate the programs in relation to established goals and identify new elements which should be added to the program;

Promoting the TSM programs by giving orientation briefings to new employees, providing information aids to be distributed to LBNL employees, organizing an information center, and selling transit tickets on-site at LBNL;

Reviewing LBNL shuttle service and transit interface facilities; and

Reviewing bicycle routes and storage facilities for improvements.

Mitigation Measure III-I-1b:

LBNL will conduct bi-annual peak hour traffic counts in and around LBNL. In particular, the bi-annual count will include the Gayley Road corridor between Hearst Avenue and Bancroft/Piedmont.

Mitigation Measure III-I-1c:

If and at such time as the level of service at intersections along the Gayley Road corridor reaches "D," a review of necessary improvements will be conducted with UC Berkeley;

Mitigation Measure III-I-1d:

LBNL will pay for its fair share of allowable and necessary signalization improvements along the Gayley Road corridor proportional to LBNL's share of increases in traffic.

TABLE S-2 (Continued)
EXISTING MITIGATION MEASURES FROM THE 1987 LRDP EIR, AS AMENDED,
TO BE APPLIED TO THE PROJECT

Traffic and Parking (cont.)

Mitigation Measure III-I-1e:

Details of the Gayley Road corridor improvements, including environmental assessment of the improvements, will be reviewed at the time the thresholds are reached.

Mitigation Measure III-I-2:

LBNL will continue to implement and monitor the implementation of its Transportation System Management Program.

Utilities

Mitigation Measure III-M-1:

Prior to construction of any project which may add significant sewer load to the city sanitary sewer system, LBNL will investigate the potential impact of the project on the city system. LBNL will identify mitigation measures to accommodate the sewer load if the impact investigation indicates that the city system could not accommodate the additional sewage. LBNL will reimburse the City of Berkeley and/or EBMUD for its fair share of allowable and necessary sewer improvement capital costs which are needed to accommodate increased demand and mitigate sewer impacts resulting from implementation of the LBNL LRDP.

CHAPTER III

PROJECT DESCRIPTION

A. INTRODUCTION

This environmental impact report (EIR) evaluates a proposal for construction of an office building at the Lawrence Berkeley National Laboratory (LBNL; also referred to as “Berkeley Lab,” “the Laboratory,” or “the Lab”). Designed to help alleviate overcrowding in other LBNL buildings, the new office building, to be known as “Building 49,” would be occupied by up to approximately 240 current LBNL employees. The proposed building, therefore, would neither increase nor decrease the employment level of the LBNL site, and thus would have no effect on travel to and from LBNL.

B. PROJECT LOCATION AND EXISTING CONDITIONS

LBNL, situated in the eastern hills of the cities of Berkeley and Oakland, is located on approximately 200 acres that are owned by the University of California and leased to the U.S. Department of Energy (DOE) (see Figure III-1, Regional Location Map). The DOE owns the facilities and structures that comprise LBNL, and contracts out the management and operation of the National Laboratory to the University of California.

LBNL is surrounded by open space, institutional uses, and residential and neighborhood commercial areas. South and southeast of LBNL is the approximately 1,230-acre University of California, Berkeley, campus, a public institution operated and maintained by the University of California, and attended by more than 31,800 graduate and undergraduate students. The campus includes the open space areas of Strawberry Canyon southeast of LBNL. Residential neighborhoods and a small neighborhood commercial area in the City of Berkeley lie to the north and northwest. Regional open space lies to the northeast, including the 2,000-acre Tilden Regional Park. The 205-acre Claremont Canyon Regional Preserve is south of LBNL.

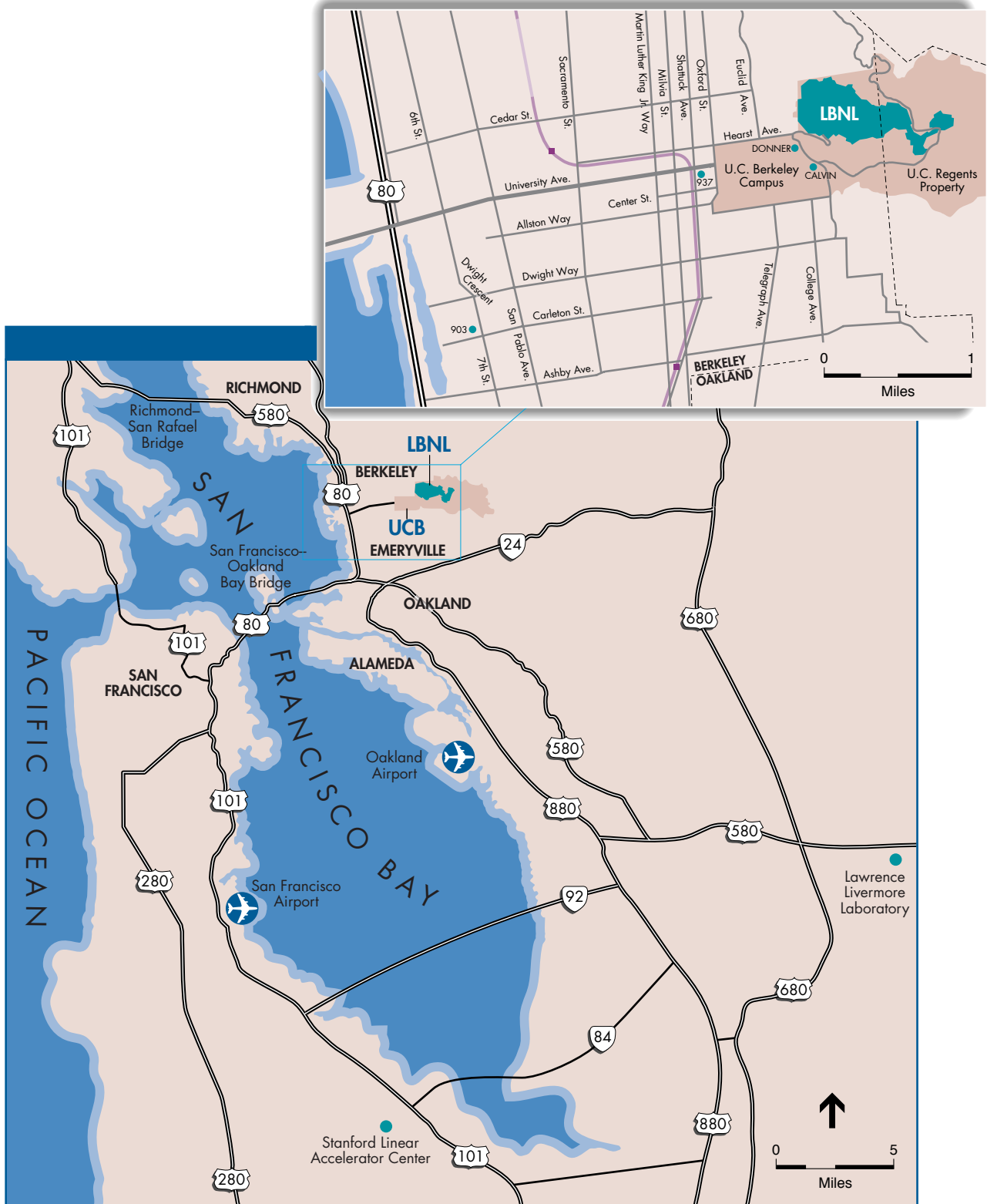
The proposed project site is located in the western portion of the LBNL facility, which since 1931 has been located in the Oakland-Berkeley hills. LBNL employs an estimated 3,500 persons, including approximately 1,300 scientists and engineers, 500 managers and administrators, and 1,700 technical and support staff. In addition, some 2,000 guest researchers visit LBNL yearly.

The approximately 1.08-acre Building 49 site is currently undeveloped and is located on a hillside between Cyclotron Road and East Road, within the city limits of Berkeley (see Figure III-2, LBNL Site Map). The site is near LBNL’s main entrance, the Blackberry Gate entrance on Cyclotron Road (see Figure III-3, Location Map). It is adjacent to the Building 50 complex to the east, Cyclotron Road, Building 65, and Building 88 to the west, the main LBNL shuttle bus stop

RESERVE FOR FIGURE III-1

(REGIONAL LOCATION MAP)

COLOR FIGURE



SOURCE: Lawrence Berkeley National Laboratory (2003)

LBNL Building 49 / 202210 ■
Figure III-1
 Regional Location Map

RESERVE FOR FIGURE III-2

LBNL SITE MAP

COLOR FIGURE



SOURCE: Lawrence Berkeley National Laboratory (2003)

LBNL Building 49 / 2022.10 ■

Figure III-2

Lawrence Berkeley National Laboratory

Site Map



LBNL Building 49 / 2022/10 ■
Figure III-3
 Location Map

SOURCE: Lawrence Berkeley National Laboratory (2003)

to the north, and a Building 50 stairway and undeveloped hillside further to the south. Building 49 would be accessible from both Cyclotron Road at the first floor level on the west side of the building, and from East Road at the sixth floor level on the east side of the building (see Figure III-4, Site Plan).

The project site lies upslope from and southeast of the north fork of Strawberry Creek², on a steep slope that includes non-native annual grasses, a few relatively common native herbaceous species, and a small area of mixed grassland along the northern and western perimeters of the site. The site also includes approximately 20 mature eucalyptus, 1 bay, and 8 coast live oak trees.

The site is located within LBNL's designated Central Research and Administration Area, which consists of approximately 487,700 square feet of office and research space. Also included in this area are Buildings 50 and 50A through 50F, which provide office and research space; Buildings 70 and 70A, which provide research space, and Building 54, the LBNL cafeteria (see Figure III-2). The project site has no record of soil or groundwater contamination or association with any past solid waste management units (SWMUs), areas of concern (AOCs), or other past activities that might be indicative of contamination.

C. PROJECT OBJECTIVES

The proposed Building 49 is intended to help address a shortage of office space at LBNL that results in overcrowded work conditions for many staff. It would advance LBNL towards its target—as recommended by the General Service Administration—of 135 net square feet of primary office space per person. LBNL's current space allocation is approximately 100 net square feet per office worker. As proposed, Building 49 would achieve the maximum possible “decompression” space on a site identified in the LBNL Long-Range Development Plan (LRDP) for construction of a new building. The Building 49 project would be a third-party development (constructed by an independent developer for the Lab), thereby eliminating the need for scarce governmental funding otherwise necessary to construct such a building on site. It would provide a building that is in close proximity to where it would be most useful (i.e., near the front entrance and near the Building 50 complex), and it would be an opportunity to create a signature building that serves as a focal point to LBNL for visitors entering the main gate at Blackberry Canyon. In contrast to using additional leased space off-site, Building 49 would minimize the inefficiencies of staff being segmented from the main Berkeley Laboratory; it would reduce time, money, and other impacts associated with frequent travel between off-site leased space and the main site in the everyday conduct of LBNL business; and it would help achieve the LBNL objective of consolidating Laboratory staff and functions on site wherever practical.

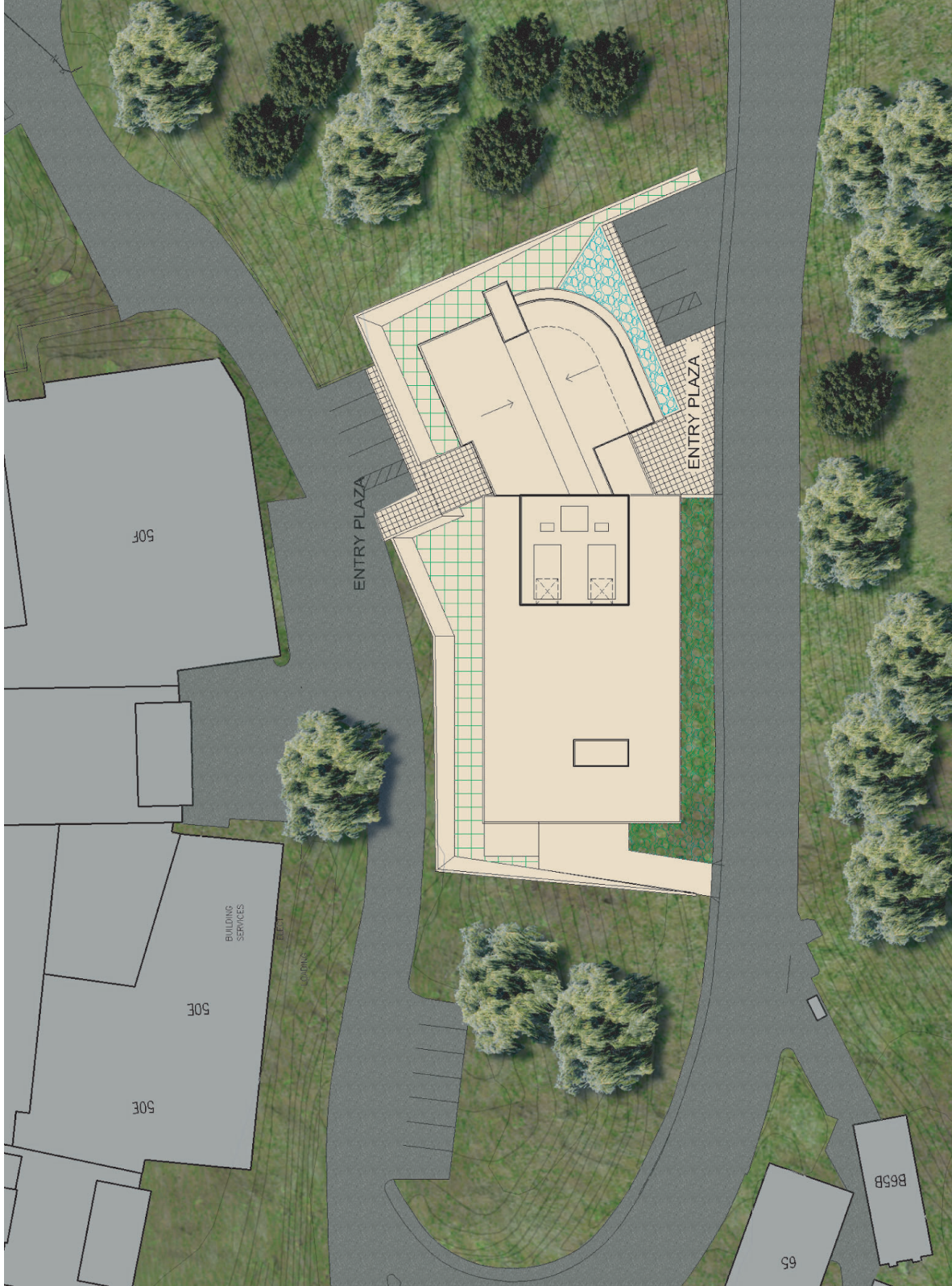
² Although the proposed project is approximately 500 feet distant and upslope from the north fork of Strawberry Creek, stormwater drainage from the project site is directed into the intervening storm drainage system along Cyclotron Road.

RESERVE FOR FIGURE III-4

BUILDING 49 SITE PLAN

(WITH PROJECT PLAN VIEW)

COLOR FIGURE



— LBNL Building 49 / 2022/0 ■

Figure III-4
Building 49 Site Plan

SOURCE: Lawrence Berkeley National Laboratory (2003)

The proposed project should be cost-effective (e.g., roughly comparable to or less than the costs associated with leasing equivalent prime office space in nearby off-site areas) as measured by the direct and indirect costs of leasing Building 49 over the lifetime of the project. It should be constructed to meet the Lab's goal of decompressing office staff as soon as possible. As a building constructed and owned by a third-party developer, the proposed project should be constructed on a UC-owned parcel that is not contemporaneously leased to the Department of Energy.

D. PROPOSED PROJECT

Building 49 would be a six-story, 65,000-square-foot office building. The University of California proposes to enter into a ground lease with a third-party developer that would allow the developer to finance, design, build, own and maintain the building. The University would lease the building from the developer for use by LBNL through a Rental Agreement. LBNL would use the building for office and meeting space, and would "decompress" existing staff from other areas of Berkeley Lab that are currently overcrowded or that do not meet LBNL workspace standards for office workers. The proposed building, therefore, would neither increase nor decrease the employment level of the LBNL site.

The new building would include a partial ground floor with access from Cyclotron Road and a small number of work stations; four full-sized floors with open work stations, and a partial sixth floor with access from East Road. The sixth floor would have a series of meeting rooms; there would be smaller meeting rooms on the remaining floors, and copy/prINTER/supply rooms, kitchenettes, and a computer server room. The building would also provide a minimum of ten bicycle parking spaces, as well as employee showers. Building 49 would contain no laboratory space (see Figures III-5 through III-7). Table III-1 summarizes the building program. The design of the proposed building is further described below under "Design Considerations," p. III-12.

Construction of Building 49 would require excavation, new infrastructure, and re-vegetation. Areas disturbed by the construction would be replanted in accordance with LBNL's Integrated Landscape Management Program. Plant stock would be drought-tolerant and deer proof, require low maintenance and fertilization, and be native to the East San Francisco Bay Area environment. Also in accordance with LBNL's Integrated Landscape Management Program, future landscaping plans would be cognizant of fire and fuel management concerns.

Up to approximately 26,000 cubic yards of soil would be excavated from the site for construction of the proposed Building 49. This excavated material would be hauled off-site and used as clean fill, either in a nearby construction project or as clean cover material in a landfill. This destination will be determined at the time of construction based on local demand. Excavation would occur for about 3 months. The overall construction period would extend from approximately Spring 2004 to Fall 2005, a period of about 18 months.

**TABLE III-1
BUILDING 49 PROGRAM SUMMARY**

| Building Level | General Function | Square Feet (sq. ft.) | Description of Facilities |
|--------------------------|------------------------------|------------------------------|---|
| Ground (Level 1) | “Ground” level, lobby | 4,200 sq. ft. | Lobby accessed from Cyclotron Road. Space for building services, male and female bathroom facilities. |
| 2 | Office Space | 13,700 sq. ft. | Meeting room for 15 – 20 people, private exterior wall offices, interior private offices, open workstations, copy/prINTER/supply room, coffee room/kitchenette, server room. |
| 3 | Office Space | 13,700 sq. ft. | Smaller meeting rooms, private offices, open workstations, copy/prINTER/supply rooms, kitchenettes. |
| 4 | Office Space | 13,700 sq. ft. | Smaller meeting rooms, private offices, open workstations, copy/prINTER/supply rooms, kitchenettes. |
| 5 | Office Space | 13,700 sq. ft. | Smaller meeting rooms, private offices, open workstations, copy/prINTER/supply rooms, kitchenettes. |
| 6 | Lobby, Conference Facilities | 5,700 sq. ft. | Main entrance lobby accessible from East Road and the Building 50 complex on the east side of the building. Large meeting room seating 50 – 60 people; 3 meeting rooms seating 10 – 15 people each; 10 work carrels with computer connection and telephone; break-out areas for informal discussions; catering set-up room; and chair and table storage area. |
| Roof | | | |
| Approximate Total | | 64,700 sq. ft. | |

SOURCE: Lawrence Berkeley National Laboratory (2003)

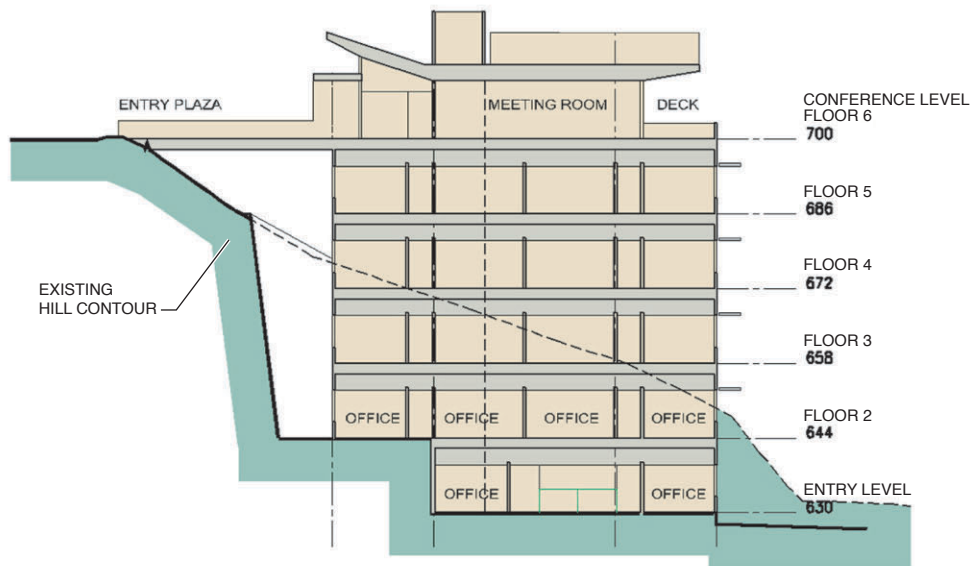
Unlike most buildings at LBNL, Building 49 would be constructed in accordance with an unsubordinated³ ground lease to a third-party developer who would own the building. The University has determined that any potential for the building to be leased or occupied by any party other than the University of California or the Department of Energy is unlikely, and is therefore not a part of this CEQA review.

³ The University’s fee interest in the site would not be subordinated or encumbered.

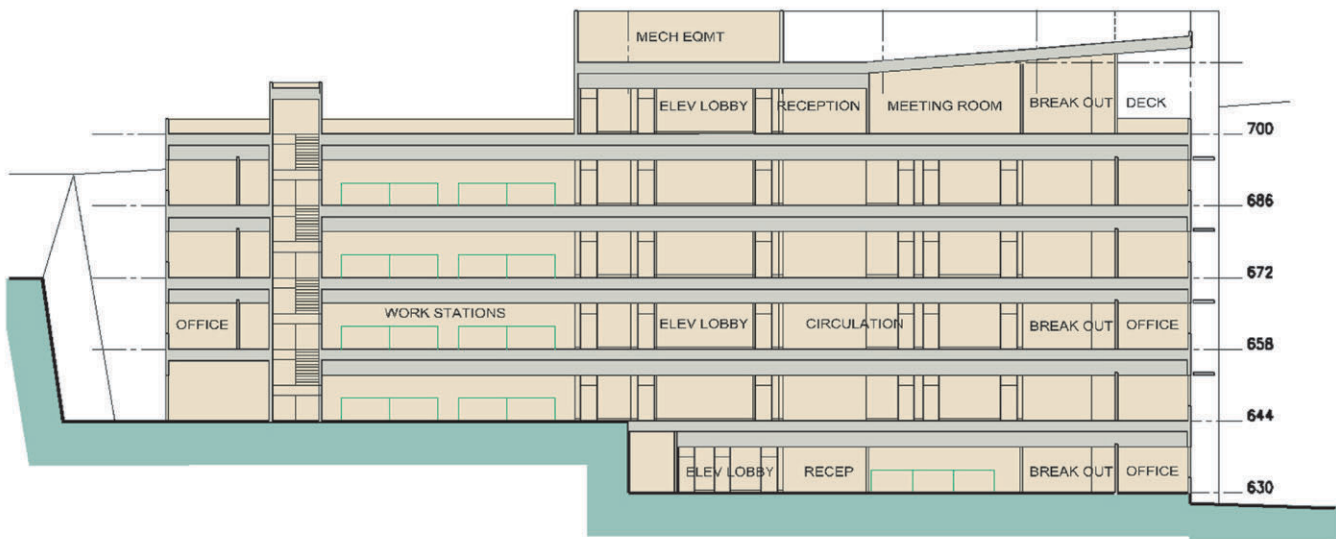
RESERVE FOR FIGURE III-5

BUILDING 49 SECTIONS

COLOR FIGURE



Section Looking South



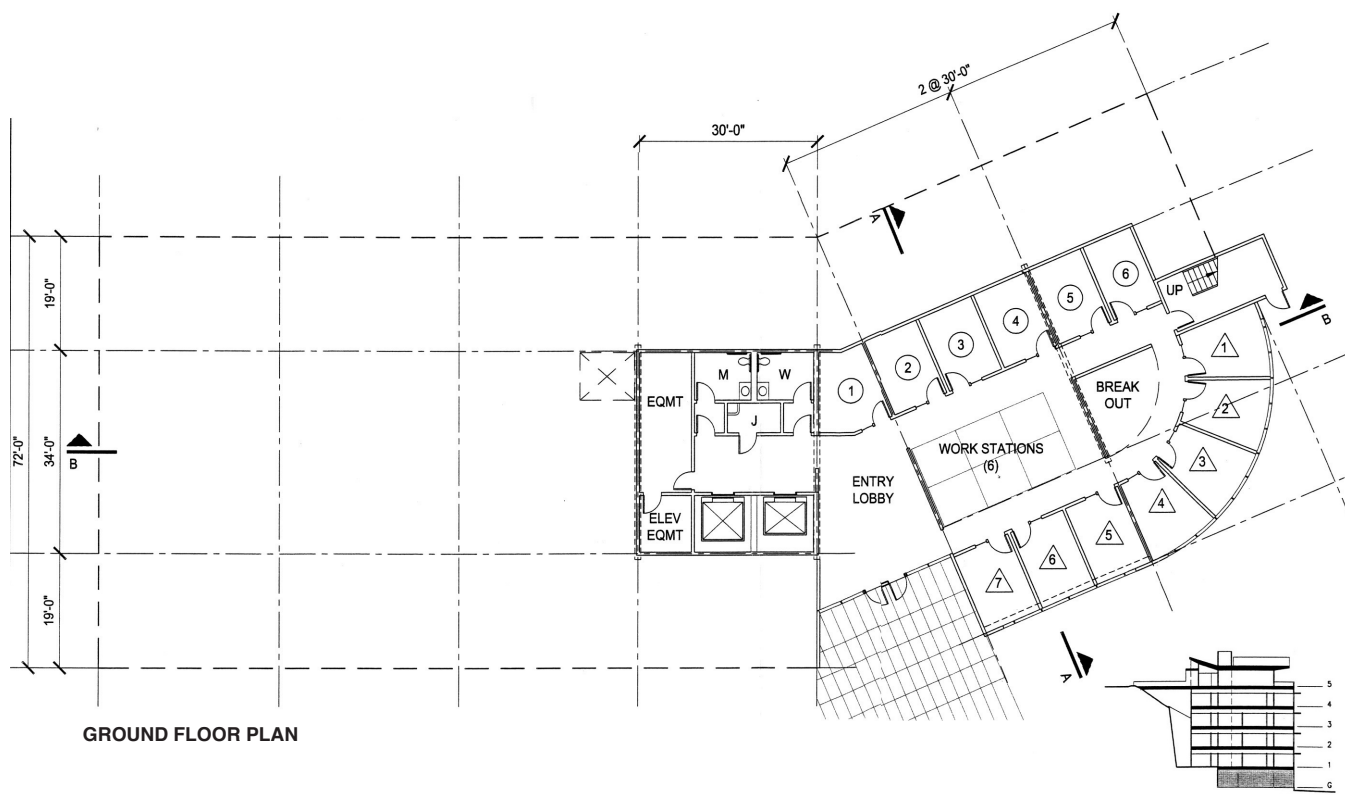
Section Looking East



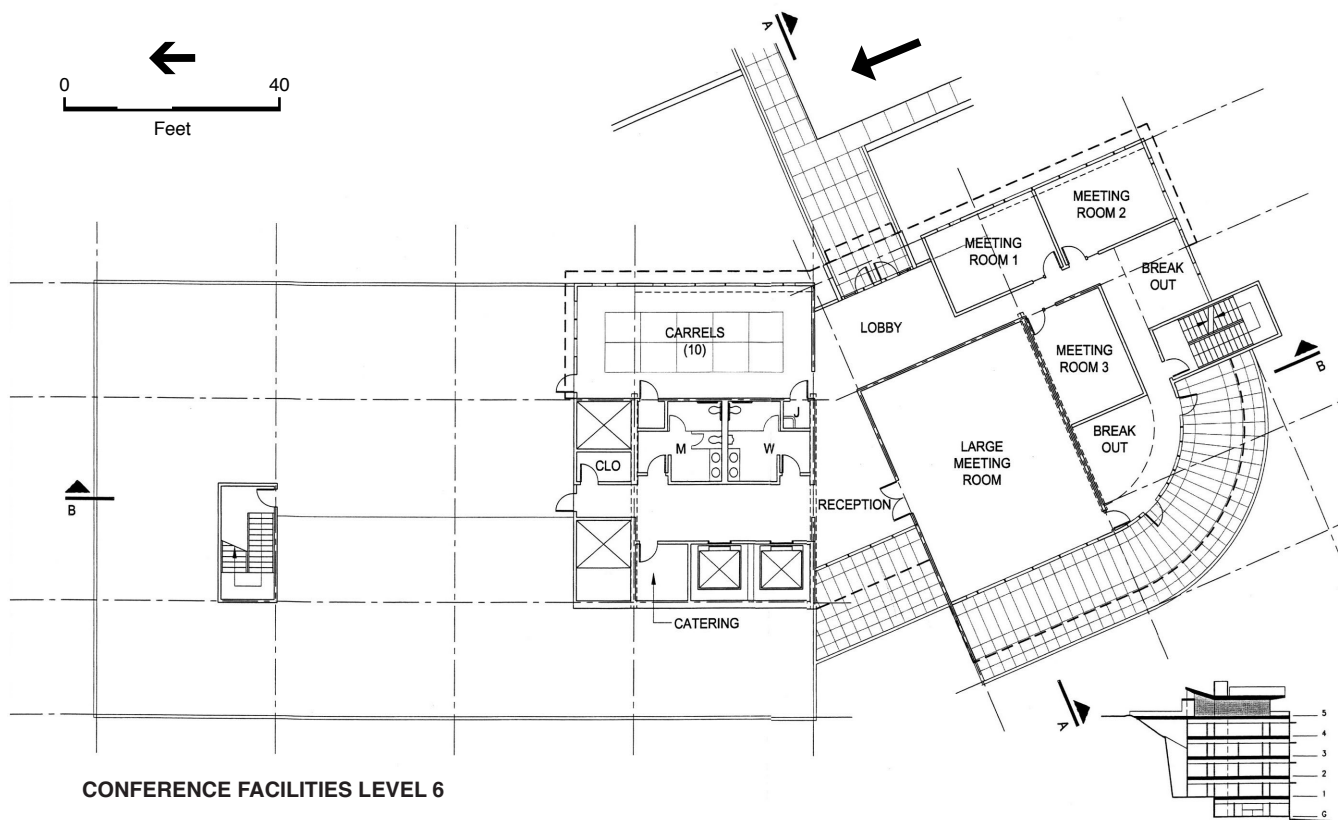
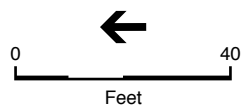
SOURCE: Lawrence Berkeley National Laboratory (2003)

LBNL Building 49 / 202210 ■

Figure III-5
Building 49 Sections



GROUND FLOOR PLAN

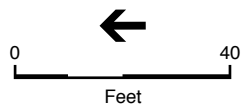
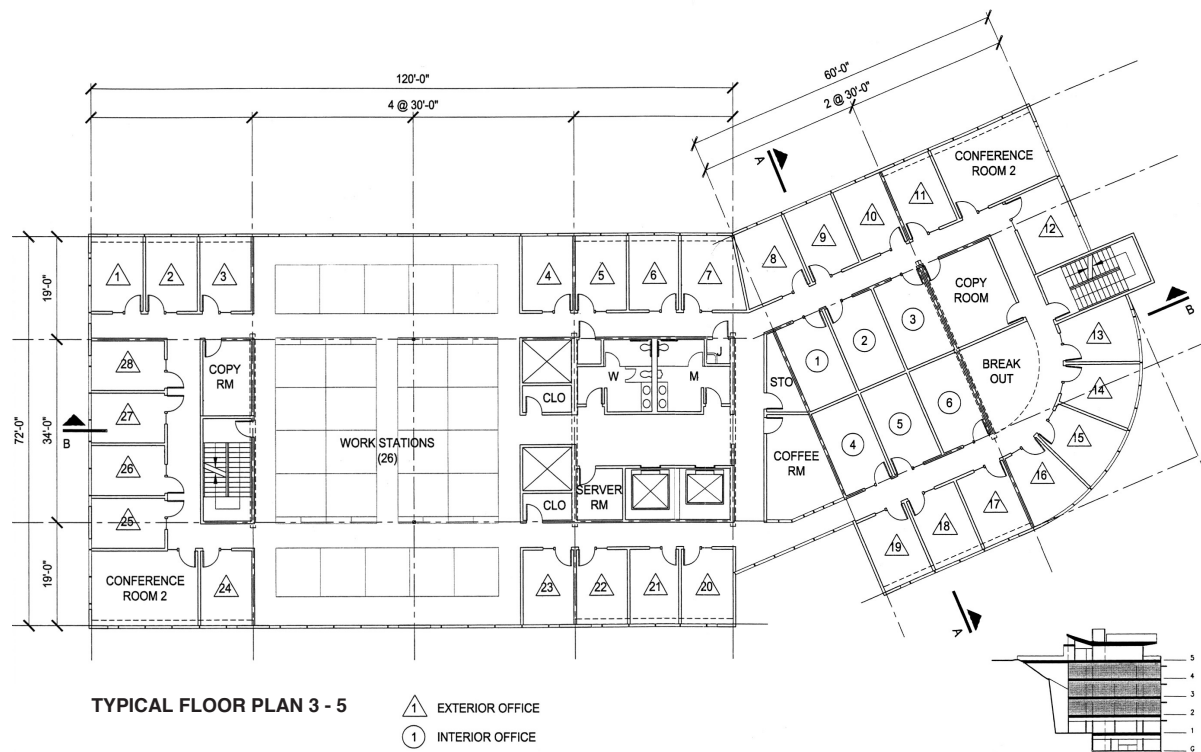
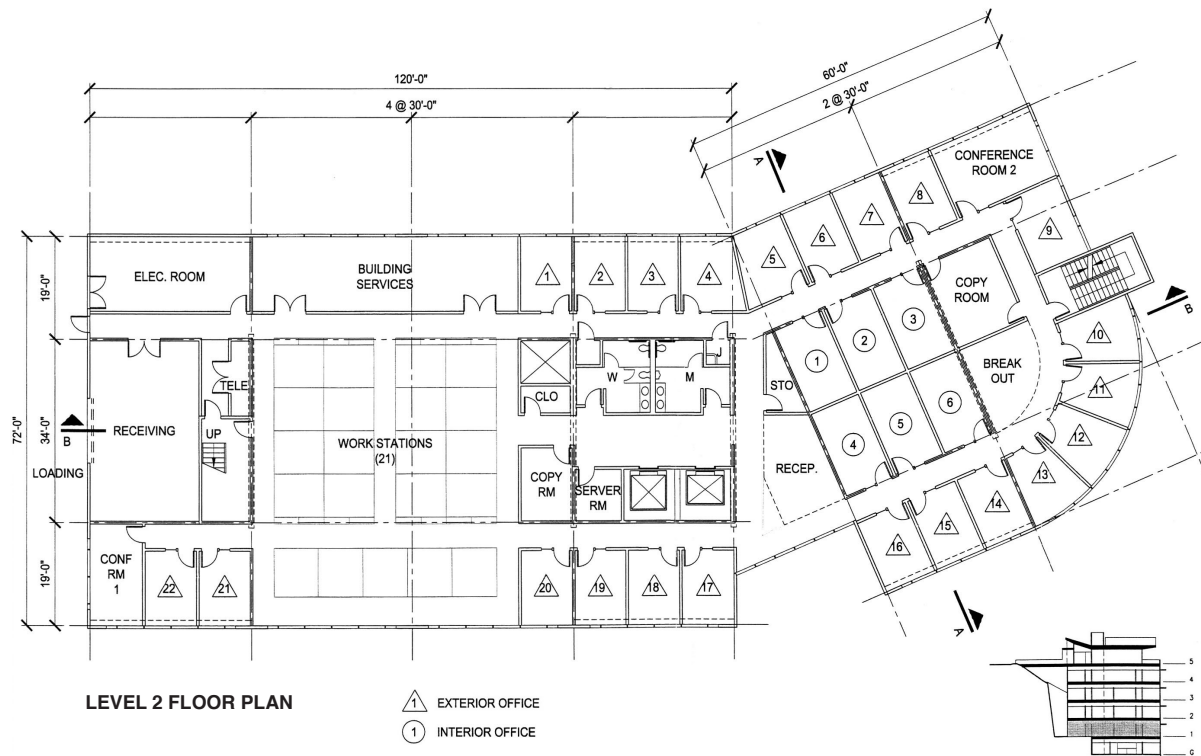


CONFERENCE FACILITIES LEVEL 6

SOURCE: Lawrence Berkeley National Laboratory (2003)

LBNL Building 49 / 202210 ■

Figure III-6
Building 49 Upper and Lower Levels



SOURCE: Lawrence Berkeley National Laboratory (2003)

LBNL Building 49 / 202210 ■

Figure III-7
Floor Plans, Levels 2 - 5

BUILDING 49 OPERATIONS

STAFFING

Building 49 would alleviate overcrowding in other LBNL buildings and would be occupied by an estimated 240 existing LBNL scientific and scientific support staff. In addition, a typical maximum of approximately 20 visitors per day would also occupy the building. At this time, it is estimated that approximately 70 percent of the Building 49 employees would come from the Building 50 complex, and approximately 30 percent of Building 49 employees would come from the Building 70 complex. Similarly, the vast majority of the visitors would be coming to LBNL to meet with existing LBNL on-site staff.

For these reasons, none of the 240 staff positions or the anticipated visitors would create new net impacts and therefore they are not a contributing factor for most impacts analyzed herein.

DESIGN CONSIDERATIONS

BUILDING DESIGN

Building 49 would be designed to complement the natural features of its site, as well as adjacent buildings and the predominant architectural style of LBNL. The building also would be designed to provide short-range views of the Blackberry Canyon entrance area along Cyclotron Road, and long-range views of the University of California, Berkeley, campus and adjacent neighborhoods, as well as the San Francisco Bay (See Figure III-8, Building 49 Conceptual Form Looking Northeast).

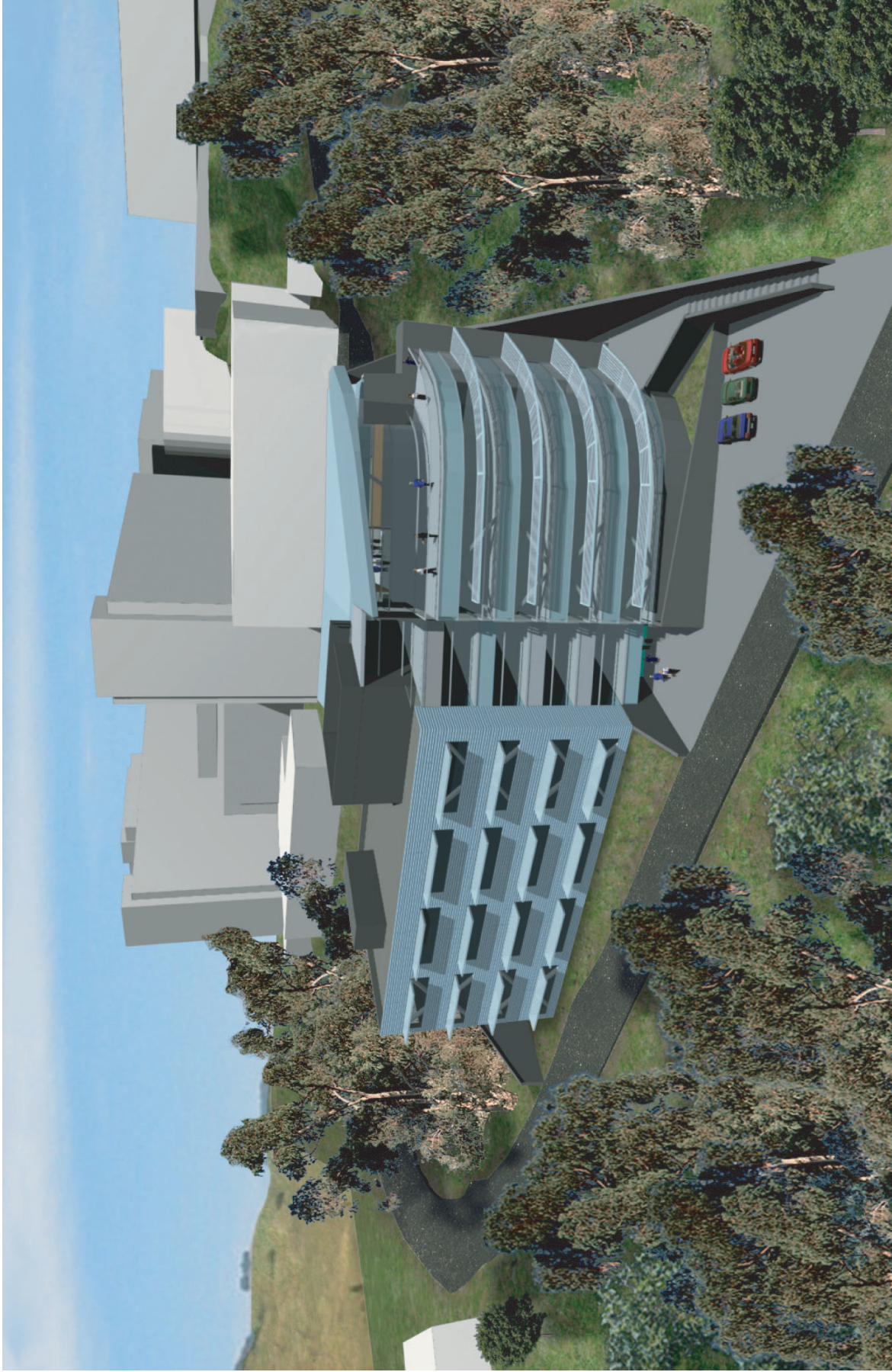
Built on a sloped site, Building 49 would consist of stacked and identical floor space on the second through fifth floors (see Figure III-7, above), and smaller floor plates on the entry level and sixth floor (see Figure III-6, above). The ground/entry level, would provide space for a lobby accessible from Cyclotron Road and space for building services; there also would be a rooftop utility penthouse. The project would include a small service yard along Cyclotron Road, and connecting walkways and steps to the first- and sixth-floor lobbies. The sixth floor would feature accessible meeting rooms from East Road and the Building 50 complex, as well as by stairs and elevator from elsewhere in the building (see Figure III-6, above). The building would not include laboratory fixtures or specialized air-handling equipment.

Building 49 would also include ten parking spaces, five located at the ground level, adjacent to the entry plaza on Cyclotron Road, and five adjacent to the entry plaza along East Road. These parking spaces are designed primarily for fleet parking and short-term deliveries, and would also include handicapped parking spaces. The site includes seven existing parking spaces along the western side of East Road; most of these parking spaces would remain.

FIGURE III-8

BUILDING 49 CONCEPTUAL FORM LOOKING NORTHEAST

COLOR FIGURE



LBNL Building 49 / 2022.10 ■
Figure III-8
 Building 49 Conceptual Form
 Looking Northeast

SOURCE: Lawrence Berkeley National Laboratory (2003)

The new building would be required by LBNL and the University of California to meet design requirements outlined in Lab and University specifications. For example, the project would be required to meet the criteria for a Silver rating under the U.S. Green Building Council's "Leadership in Energy & Environmental Design" (LEED) Rating System.⁴ This rating system considers such factors as optimizing energy performance, landscaping and exterior design to reduce heat islands (roof and non-roof), site selection, water efficiency, ozone depletion, construction waste management, indoor environmental quality, and innovation in design, among others.

While many interior and exterior materials have not been finally determined, specifications for Building 49 would require maintenance-free exterior siding, interior finishes made of recycled materials, and low-volatility or non-volatile organic compound (VOC) paints and coatings. The University also requires that the building be "aesthetically pleasing," and design will be judged on the "compatibility between [the] Office Building and existing adjacent facilities" (OJO Associates. 2002a, p. 9). The project must conform to the following:

- Bay Area Air Quality Management District Rules and Regulations, as amended;
- California Building Code (CBC), 2001 edition;
- California Electrical Code (CEC), 2001 edition;
- California Mechanical Code (CMC), 2001 edition;
- California Plumbing Code (CPC), 2001 edition;
- California Energy Code (CEC), 2001 edition;
- California Elevator Safety Construction Code, 2001 edition;
- California Fire Code (CFC), 2001 edition;
- California Code of Regulations, Title 19;
- Clean Air Act (CAA), as amended;
- Clean Water Act (CWA), as amended;
- Code of Federal Regulations, Title 40, Part 82, Protection of Stratospheric Ozone;
- NFPA National Fire Codes, latest edition;
- National Electrical Code (NEC), 2002 edition;
- National Electrical Safety Code, ANSI C2;
- Occupational Safety and Health Act (OSHA);
- General Services Administration 41 CFR Part 101-19;
- Americans with Disabilities Act (ADA);

⁴ The LEED rating system is a "voluntary, consensus-based national standard for developing high-performance, sustainable buildings." It takes into account factors such as site sustainability, water efficiency, energy use, building materials, indoor air quality, and innovation in building design. Buildings can be rated, in order of ascending compliance with the standards, "Certified," "Silver," "Gold," and "Platinum." (Source: U.S. Green Building Council website, http://www.usgbc.org/LEED/LEED_main.asp; accessed June 28, 2003).

- American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE) Standard 62 Ventilation for Acceptable Indoor Air Quality;
- Associated Air Balance Council (AABC) National Standards for Total System Balance;
- Underwriters' Laboratories (UL) Standards and "Building Materials, Fire Protection Equipment, and Fire Resistive Directories";
- Lawrence Berkeley Laboratory Health and Safety Manual, Publication 3000, latest edition; and
- "Lateral Force Design Criteria," RD3.22 of LBNL Design Management Procedures Manual.

CIRCULATION

As further described below, vehicular access to Building 49 would be accommodated via Cyclotron Road and "E" or East Road (see Figure III-4, above). The proposed building therefore would be accessible from the east along Lawrence Road or McMillan Road and from the west from Cyclotron Road. In addition to vehicular access, the design of Building 49 addresses three other types of circulation: building occupant/pedestrian circulation, service access, and fire/emergency services access (see Figure III-4, above). Entrances to the Building 49 would be located as follows: Level 1, main entrance accessible from Cyclotron Road on the west side of the building; and Level 6, main entrance accessible from East Road and the Building 50 complex on the east side of the building.

Each floor of Building 49 would be organized around two main corridors that would provide access to the offices, meeting rooms, kitchenettes, bathrooms, stairs, and elevators. All foot traffic through the building would be routed through these main corridors, stairs, and elevators. A short pedestrian walkway along East Road would provide direct access between the Building 49 entrance on the sixth floor and the lower level of Building 50E, northeast of the Building 49 site. A walkway from the Cyclotron Road parking lot would allow direct pedestrian access from Cyclotron Road to the entrance of Building 49 on the ground floor.

A service entry, delivery, and truck loading area would be provided on Cyclotron Road, near the ground floor entry plaza to Building 49. Fire truck and emergency services access would also be accommodated from Cyclotron Road. This access would provide sufficient turn-around for emergency vehicles. Fire and emergency vehicle access to the east of the building would be provided from East Road.

Roadway Design and Parking

There would be no new roads, road extensions or improvements as part of the project, with the exception of a project access driveway cut along East Road. Building 49 would include a separate delivery area that would not interfere with onsite parking. As noted, 10 parking spaces would be provided on the Building 49 site project for deliveries, fleet, and handicapped parking needs.

Storm Drainage and Impermeable Areas

The proposed project would add up to about 15,000 square feet of impervious surface to the project site. This is less than one-half of one percent of the 92-acre Stadium Hill portion of the Strawberry Creek watershed, and an even smaller portion of the total watershed area of 585 acres. Surrounding undeveloped areas would remain undeveloped and permeable and would continue to support grassland and tree groves. Walkways would be paved with interlocking permeable concrete pavement, asphalt, concrete, or Portland cement concrete capable of handling appropriate pedestrian traffic. To the greatest extent possible, existing pervious surfaces would be preserved to minimize the amount of storm runoff. The entry plazas located on levels one and six would be a combination of paved and planted areas.

Surface runoff from the proposed Building 49 site would be routed into the LBNL storm drain system at points downslope and to the south of the proposed building. The drainage system would be capable of handling a 25-year storm of 2.5 inches of rain per hour. Stormwater runoff from the proposed project would be intercepted into an existing 24-inch storm pipe located at the east side of Horseshoe Curve, which discharges into the north fork of Strawberry Creek.

All storm water generated within LBNL must conform to LBNL's Storm Water Pollution Prevention Plan (SWPPP) and National Pollutant Discharge Elimination System (NPDES) permit, as required by the Clean Water Act and the State Water Resources Control Board. Oversight and enforcement of LBNL's SWPPP and NPDES permit are performed by the San Francisco Bay Regional Water Quality Control Board and the City of Berkeley.

EARTHWORK

As noted, up to approximately 26,000 cubic yards of soil would be excavated from the site for construction of the proposed Building 49. A reinforced concrete retaining wall would be constructed along the west side of East Road, where excavation would occur to create the pad for Building 49. Building 49 would be set back an average of approximately 12 feet from the east retaining wall.

LANDSCAPING

The proposed project would include site landscaping supported with a drip irrigation system. Areas disturbed by the construction would be replanted based on LBNL's Integrated Landscape Management Program. Plant stock would be drought-tolerant, deer proof, require low maintenance and fertilization, and be native to the East San Francisco Bay Area environment. Soils left over from construction, or subsoil, would not be used in place of topsoil.

The preliminary plans include the planting of California live oaks (*Quercus agrifolia*), California coffeeberry (*Rhamnus californica*), manzanitas, California buckeye (*Aesculus californica*), and other native trees and shrubs. Plant materials would be selected based on their indigenous, water-saving, and low-maintenance characteristics. The majority of the disturbed areas of the site that are not built upon would be replanted with seasonal grasses common to the LBNL area. The

irrigation system would be designed to apply water as necessary, and moisture sensors would assist in determining the need and duration of irrigation water. The building entries, sitting areas, and outside use areas would be irrigated to assure that specific types of ornamental plants thrive, while over time the majority of the plants throughout the site would be weaned off the irrigation system to allow them to naturalize. The proposed site retaining wall would be designed to accommodate an integrated irrigation and planting system that would substantially cover the wall with drought-tolerant vines within 18 months.

With the exception of a cluster of coast live oaks in the northernmost portion of the project site, the proposed project would require that most or all of the trees on the project site be removed to accommodate the building footprint, walkways, grading, and construction activities. These trees are primarily mature eucalyptus. Replacement trees would be planted or transplanted in various locations in and surrounding the project site, and positioned to maximize screening benefits. The Lab's 1987 LRDP EIR, as amended, anticipates the loss of mature trees as the result of Lab development (Impact III-D-2) and stipulates that revegetation of the sort described here be included as part of all new projects (Mitigation Measure III-D-2a).

UTILITIES

UTILITIES CORRIDOR

All basic utilities, including water, sanitary sewer, storm water, electrical, natural gas lines, and telecommunications exist on or adjacent to the proposed Building 49 site.

WATER SUPPLY

Existing LBNL water lines are located adjacent to the Building 49 site on the south and east sides. A new 8-inch water line is adjacent to the northern edge of the site. The project would connect to an existing 8-inch tee on the northeast corner of the site. Water is supplied by the East Bay Municipal Utility District (EBMUD).

STORM WATER

As discussed earlier, new storm drainage from Building 49 would be collected and discharged into an existing LBNL sub-grade, 24-inch stormwater drainage pipe located at the east side of Horseshoe Curve, south of the site. This pipe discharges to the north fork of Strawberry Creek.

SANITARY SEWER

The sewer line for the proposed project would be connected to an existing LBNL 6-inch main located along Cyclotron Road at Manhole SSMH5N12E.

ELECTRICITY

Electrical service exists adjacent to the Building 49 site, along the west side of the Building 50 complex, and would likely connect to Building 49 from the southwest corner of Building 50F.

NATURAL GAS

An existing 4-inch high-pressure gas main is located on the eastern side of the Building 49 site. The project would hot-tap the carbon steel main and provide an isolation valve for the office building connection.

TELECOMMUNICATIONS

Telephone and data connections are adjacent to the Building 49 site in underground manholes and duct banks.

CONSTRUCTION

Construction would take place over an 18-month period, beginning in Spring 2004 and ending in approximately Fall 2005. The University anticipates that Building 49 would be ready for occupancy in Fall 2005. Construction staging for Building 49 likely would take place at the northern end of the building site, in an area accessible from both Cyclotron Road and East Road, at the Building 70A loading dock, and at the “horseshoe” parking lot inside of the hairpin turn on Cyclotron Road. Truck trips for off-site soil hauling would be limited to the hours between 9:00 a.m. and 4:00 p.m.

The approximately 26,000 cubic yards of excavated soils would be hauled to an off-site landfill or construction site via Cyclotron Road (Blackberry Canyon Entrance), Hearst Avenue and University Avenue, to Interstate 80. The destination(s) of the material (i.e., Hayward or Martinez, or both) would dictate in which direction trucks would then travel on I-80. On the basis of the an average haul truck capacity of 12 cubic yards per truck, there would be about 2,170 total truck loads (i.e., about 4,340 one-way truck trips) spread over the three-month period when site excavation occurred. Because those truck trips would be made during the seven-hour period between 9:00 a.m. and 4:00 p.m. (to avoid the commute traffic hours), 33 trucks per day would generate 66 daily one-way trips, with average of nine one-way trips per hour (i.e., one truck every 6.5 minutes).

E. REQUIRED PROJECT APPROVALS

Development at the proposed site is governed by the LBNL Long Range Development Plan (LRDP) adopted by the University of California in August, 1987. The LRDP anticipates that additions and replacements in this area would add a net total of 41,100 sq. ft. of space, and no net increase in staff.

LBNL is a federal facility operated by, and conducting work within the public service mission of, the University of California, as authorized by the California State Constitution. LBNL is therefore not subject to local zoning and planning regulations. However, it is the policy of LBNL and the University to work cooperatively with local agencies in planning matters to the extent feasible. In general, the City of Berkeley's General Plan designates land uses at LBNL *Institutional* or *Open Space*. Institutional uses are described as "[a]reas of the City for institutional, government, educational, recreational, open space, nature habitat, woodlands, and public service uses and facilities, such as the University of California" (with a floor to area ratio of 0 to 4). Open space uses are described as "areas of the City appropriate for parks, open space, pathways, recreational facilities, natural habitat, and woodlands" (with a floor to area ratio of 0 to 0.5). The project site is designated Institutional.

LBNL is located on land owned by the University of California. The Board of Regents of the University of California (The Regents) is the University's decision-making body. The Regents will be asked to review and consider this EIR in conjunction with their review and consideration of the ground lease to a third-party developer, a facility lease between the third-party developer and the University, and design approval of the proposed construction of Building 49. It is currently anticipated that Building 49 ground lease, facility lease, and design would be presented for The Regents' consideration and approval at the December 2003-January 2004 Regents meeting.

The proposed project would be designed, constructed, financed, operated and maintained by a third party (i.e., a private) developer, rather than by the DOE or the University of California. All design, construction plans and specifications, construction operations, financial arrangements, operations and maintenance must be approved by the University. The terms of the ground lease would require the developer to accept an unsubordinated ground lease for a thirty-year term. The developer would then be responsible for executing a year-to-year facility lease with the University of California, which would have 29 one-year options to renew.

In the event the University chose not to occupy all or part of Building 49 and with the University's approval, the developer could lease to a third-party occupant.⁵ However, the University has determined that this scenario is not reasonably foreseeable, as the purpose of Building 49 is to provide additional office space for LBNL use, and therefore, it would be speculative to analyze third-party occupancy in this EIR. If at some time in the future the University did not exercise its option to lease or purchase Building 49, the University would be required to conduct further CEQA review at that time to determine, as appropriate, what potential environmental impacts might result from non-University occupancy of the building. This analysis could include, for example, whether new traffic impacts would result, and if new parking facilities were needed. Any such reuse of the building would require all appropriate CEQA and permitting approvals to be met and issued. If, during the lease term, the developer wished to sell the project and/or assign its interest in the ground lease to another party, the University would have the first right of refusal to purchase the project improvements.

⁵ Occupancy by a third-party occupant would require the University to move LBNL's security perimeter to exclude the building.

The State Water Resources Control Board and the Regional Water Quality Control Board (SWRCB/RWQCB) have permitting authority for issuing a Storm Water Construction Permit, which is required for construction projects of more than one acre. Because the project site exceeds one acre, the proposed project would require a Storm Water Construction Permit from the SWRCB/RWQCB. Under this permit, appropriate best management practices (BMPs) would be implemented to contain storm water runoff from the construction site and prevent contaminated water from entering the storm drains. Such BMPs would include measures in regard to saw cutting, concrete washout, materials storage, housekeeping, truck and construction equipment movement, and erosion and sediment control. In addition, these two agencies must be notified of any LBNL modification to the Lab's Storm Water Pollution Prevention Plan (SWPPP), which is part of its larger NPDES Phase I Industrial Permit. Modifications to this SWPPP would be necessary if final project design includes any operational elements that would affect runoff or involve a routine unauthorized discharge as defined in the permit. This is not anticipated at this time.

The East Bay Municipal Utility District (EBMUD) has permitting authority for issuing a Wastewater Discharge Permit. The current site-wide Wastewater Discharge Permit is adequate; but any project-related changes to this permit would require notification of EBMUD. Although this is not anticipated at this time, a determination will be made based on specific research plans that are developed through final design of the proposed project.